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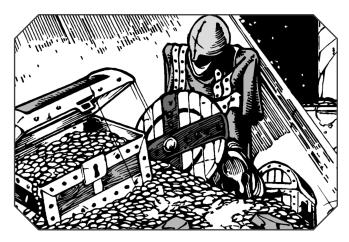


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ABOUT GURPS

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Errata. Everyone makes mistakes, including us – but we do our best to fix our errors. Up-to-date errata pages for all *GURPS* releases, including this book, are available on our website – see above.

Rules and statistics in this book are specifically for the *GURPS Basic Set, Fourth Edition.* Page references that begin with B refer to that book, not this one.

INTRODUCTION

Reduced to its essentials, the dungeon fantasy genre consists of sword-and-sorcery heroes with cool powers killing things and taking their stuff.

- GURPS Dungeon Fantasy 8: Treasure Tables

If there's one thing delvers can't get enough of, it's *treasure*. From glowing magic swords to heavy sacks full of rattling coins, that's what keeps adventurers digging ever-deeper into the darkest, most dangerous dungeons. *GURPS Dungeon Fantasy 6: 40 Artifacts* and *GURPS Dungeon Fantasy 8: Treasure Tables* provide a mountain of loot, but there's always room for more. *GURPS Dungeon Fantasy Treasures 1: Glittering Prizes* builds on the construction kit in *Treasure Tables*, providing yet more riches, new and expanded tables for treasure characteristics, and novel ways to make those shiny objects actually work for you.

Recommended Books

GURPS Dungeon Fantasy Treasures 1: Glittering Prizes is intended for use with and makes reference to several volumes of the GURPS Dungeon Fantasy series. In particular, it requires GURPS Dungeon Fantasy 8: Treasure Tables. GURPS Dungeon Fantasy 2: Dungeons is also heavily referenced and thus strongly recommended.

Publication History

This is the first edition of *GURPS Dungeon Fantasy Treasures 1: Glittering Prizes.* Some material first appeared in a less elaborate form in *GURPS Dungeon Fantasy 8: Treasure Tables.*

About the Author

Matt Riggsby has been playing RPGs since the only game in town came in three poorly typeset tan booklets in a white box, using cheap dice which slowly converted themselves from icosahedrons to spheres. Having been educated in the lore of lost civilizations, he still kills things and takes their stuff while working a day job for loremasters of healing. The marching order for the rest of his party includes a sorceress, a seventh-level rogue, and a pack of dogs.

WHAT'S THE DAMAGE BONUS FOR "SHINY"?

This work is mostly about the fine details of treasure, helping the GM provide lavish descriptions of the riches which delvers so painstakingly recover, giving the loot more character and the game world more flavor and detail. Players of a sadly prosaic turn of mind might not care, however, dozing off in the middle of a description and waking up only in time to ask how much it's worth. Here are some places where the little details can still have significant practical meaning to the greediest munchkin.

Identification: The more detail the GM uses to describe an item, the better adventurers can identify it and, potentially, its user. For example, a thief scouting out a lair of monsters may report back to the rest of the party that it's crucial to kill the head vampire in the gray *twill* cloak rather than the similar-looking mortal minion in the gray *basket weave* cloak.

Precision: High-denomination coins are minted to surprisingly exacting standards. They're small but can be used for very fine measurements (p. 8).

Special Currencies: While precious metals can be used for just about any mundane transaction, magical worlds might require specific media of exchange. The value of, say, a lead *obol* issued by a long-forgotten kingdom may be modest – but if the ferryman across the River of Death charges one of those lead obols, and if being ferried across the River is the only way the delvers can complete their quest, then they really need to get hold of such a coin!

Special Weapons: Just as supernatural transactions need special currencies, fantastic foes may call for special weapons. An otherwise-unstoppable behemoth may be vulnerable to, say, a whip of thorns, a gauze garrote, or a red axe. *Implausible Materials* (pp. 17-19) is the first place to look for such things, but the GM can find suitably fiddly details anywhere in this work.

Dwarfs don't really love gold. They just say they do to get it in bed.

- Terry Pratchett, Feet of Clay

IN THE CHEST YOU FIND

The treasure nearest and dearest to delvers' hearts is *money*, so it's fitting to start with a discussion of the delightful variety of materials, shapes, sizes, and styles in which cash comes, drawn from (but not limited by!) real-world history.

Connoisseurs of finer loot will be equally pleased to see further detail on decorative motifs, materials, pedigree, and related topics first introduced in *GURPS Dungeon Fantasy 8: Treasure Tables.*

FILTHY LUCRE

When you get right down to it, a lot of *Dungeon Fantasy* is about money. Sure, adventurers want bigger swords, shinier armor, and flashier fireballs, but what's it all in service of? Treasure – mostly in the form of piles of coins made from precious metal. Here's how to make that big money *really* shine.

If more of us valued food and cheer and song above hoarded gold, it would be a merrier world.

> – J.R.R. Tolkien, **The Hobbit**

Composition

The first thing that interests adventurers about coins is what they're made of. For most of history, coins have been bits of valuable metal given a stamp of approval by a political authority, their value deriving almost entirely from their metal content. That's pretty much how it works in **Dungeon Fantasy.** Whether it's an ancient lump of electrum shaped by the unknown tentacles of an Elder Thing in a previous age of the world or a shiny gold mark struck just yesterday by the King's mint, most adventurers are happy to pick it up, toss it in the bag, and convert it to useful goods and services back in town.

Coins made from non-precious metals, such as iron and lead, were issued sporadically through history. Like paper money, these lacked significant intrinsic value but were used as tokens of exchange, valuable within the issuing country but less so outside. Likewise, organic materials and stone were occasionally used for medallions and other personal décor – and sometimes for gambling tokens – but not for currency.

Fantasy coinage need not suffer from such restrictions, however. Underground dwellers may carve coins out of fine stone and gems, while forest denizens could use rare woods and

ivory. Even if such things don't carry inherent value, they might be circulated with a nominal face value, like paper money (*Folding Money*, p. 11).

To determine the material from which a random coin is made, roll on the *Coin Composition Table*.

Coin Composition Table

Roll 1d, 1d.

Roll	Material	Notes
1, 1-3	Copper	
1, 4-5	Bronze	
1,6	Brass	
2, 1-2	Billon	[1]
2, 3-4	Silver	
2,5	Tumbaga	[2]
2,6	Electrum	[3]
3, 1-3	Gold	
3, 4	Platinum	
3, 5-6	Iron	
4, 1-2	Lead	
4, 3	Gemstone	[4]
4,4	Antler	
4,5	Bone	
4,6	Ivory	
5,1	Resin	
5,2	Shell	
5,3	Wood	
5,4	Marble	
5,5	Glass	
5,6	Porcelain	
6, 1	Soapstone	
6, 2	Gypsum	
6, 3-4	Meteoric Iron	
6,5	Orichalcum	
6, 6	Implausible Material	[5]

Notes

[1] *Billon* is a copper-silver alloy. Its precise color depends on the proportions of the constituent metals, but it tends toward a pale red or pinkish tint.

[2] *Tumbaga*, never used for coinage historically, is adopted here as a catchall term for alloys of gold and copper, some of which also contain silver ("tumbaga" specifically refers to alloys used in the Americas, but the Greeks produced a similar alloy called *hepatizon*, while the Japanese produced *shakudō*). Tumbaga is coppery in appearance but can be chemically treated to remove the copper (and silver, if

present) from the surface to leave behind a thin layer of pure gold. Copper-gold alloys can also be treated to produce a purple patina.

[3] *Electrum* is a silver-gold alloy. Naturally occurring electrum was used in the early days of coinage but disappeared early in the first millennium B.C. as soon as it became feasible to separate gold and silver. Gold-silver coins appearing afterward were frequently simply debased gold coins. Electrum often has a greenish tint.

[4] Roll on the *Gems Table* (*Treasure Tables*, pp. 19-20).

[5] Roll on the table under *Implausible Materials* (pp. 17-19). Such a coin is especially likely to carry an enchantment!

Purity

A related consideration to the nominal material from which a coin is made is purity. Coins are valued by their precious metal content, so a coin which is nominally gold but actually half gold and half lead is worth half as much as its purer cousin. Purity has historically been most highly regarded for gold and silver coins, with levels of precious metal topping out just shy of 100% for the finest coins, and a bit less so for copper-based ones. "Copper" coins with 70-80% copper were common in a number of societies, with the remainder of their metal content being a mixture of lead, tin, and zinc.

High standards were not always upheld,

however. Low-quality coinage might be adulterated by a desperate regime trying to keep up with issuing currency but not actually spending its dwindling reserves to do so. What this means to the average delver is that some piles of treasure may contain coins which look like, say, gold and silver, but are in fact mostly copper or lead. Billon, tumbaga, and electrum coins can easily represent debased currency, nominally silver or gold but actually less valuable.

In the Middle Ages, mints began to adulterate the precious metal content of regular coinage not to save money but to protect the currency. Silver and particularly gold are relatively soft metals, and wear down with circulation. It wasn't a great challenge for unscrupulous individuals to shave off bits from the edges, pass along the reduced-weight coin at face value, and accumulate a store of valuable precious-metal shavings for themselves. However, lightly alloyed precious metals can become significantly harder, reducing wear and making it harder to hide clipping. Such coins are 5-10% lighter (and worth a similar percentage less) for the same size, but they're likely to be in much better shape when encountered in a treasure pile.

COIN HOARDS

Coin hoards aren't just for dragons! In eras without banks, and even in eras *with* banks but without much security (as in the face of impending warfare), there's only one way to keep your money safe: bury it in a pot or some other durable container to keep everything together. Owners who don't retrieve such caches leave little bits of treasure behind. Though small by the standards of monster-guarded caves full of treasure, forgotten coin hoards – which after all represent a common man's life's savings – can provide a modest source of income for delvers with prospecting skills. However, they can still be in a wilderness full of hives of venomous insect, viper nests, and wandering monsters – or near the sites of ancient battlefields patrolled by the shades of the unquiet dead. They might also contain relics of great personal importance to the original owner, perhaps to the point where vengeful spirits watch over them.

Hoarded coins might also be *better* coins. There's a wellknown fiscal principle that "bad money drives out good." That is, when rulers start issuing debased coins, which subjects are required to accept at the old face value, people start hoarding earlier, purer issues. In a society where silver and gold pieces are really billon and tumbaga, hidden caches of currency can provide far more valuable coins than what one might find in a merchant's purse or even the King's treasury.

DENOMINATIONS

After composition, adventurers are most concerned with how big coins are. A standard \$1 copper piece, as described on p. 14 of *GURPS Dungeon Fantasy 2: Dungeons,* weighs about 7.25 grams, making it approximately the same weight as a U.S. quarter. Silver and gold coins are quite small, however, due to the higher value of the metals and their greater density. Both are 250 to the pound, or a hair over 1.81 grams each, which is on the small side even for historical coins.

There is nothing quite as wonderful as money.

- "The Money Song," *Monty Python's Flying Circus* #29

IN THE CHEST YOU FIND

Currency systems need not confine themselves to these values, of course. The *Coin Denominations Table* (below) shows likely values of coins of various sizes and materials. Most historical coins fall at or below the 100 per pound range. For example, 260 per pound is roughly the size of a medieval European silver penny, while 100 per pound is about the size of two notable medieval coins: the Byzantine *solidus* and at least some versions of the Islamic *dinar*. There were a number of exceptions, however.



Coin Denominations Table

Below are coin sizes based on weight, given in terms of the number of coins that make up a pound (#), expressed as "(count per pound)/#"; e.g., a one-ounce coin, which is 16 to the pound, is a "16/#" coin. The weight of an individual coin in pounds is 1/(count per pound). For consistency with the rest of **GURPS**, weights assume the avoirdupois pound, not the Troy measurements that are the modern standard for precious metals, nor various other pounds on which historical coins were based.

Should alchemically inclined delvers need to know precise proportions of materials, billon is here an alloy of equal proportions of copper and silver, electrum is an alloy of equal proportions of silver and gold, and tumbaga is a mix of 80% copper, 15% gold, and 5% silver. To find the value of a coin carved from gems, multiply the value in the table by the Value modifier (V) for the specific material from p. 19 of *Treasure Tables*.

Count/#	Lead	Iron	Copper	Billon	Silver	Tumbaga	Electrum	Gold	Platinum	Gem
260	\$0.02	\$0.03	\$0.24	\$2.04	\$3.85	\$11.92	\$40.38	\$76.92	\$147.69	\$110.98
250	\$0.02	\$0.03	\$0.25	\$2.13	\$4.00	\$12.40	\$42.00	\$80.00	\$153.60	\$118.59
240	\$0.02	\$0.03	\$0.26	\$2.21	\$4.17	\$12.92	\$43.75	\$83.33	\$160.00	\$127.10
220	\$0.02	\$0.03	\$0.28	\$2.41	\$4.55	\$14.09	\$47.73	\$90.91	\$174.55	\$147.51
200	\$0.02	\$0.03	\$0.31	\$2.66	\$5.00	\$15.50	\$52.50	\$100.00	\$192.00	\$173.95
175	\$0.02	\$0.04	\$0.36	\$3.04	\$5.71	\$17.71	\$60.00	\$114.29	\$219.43	\$219.79
144	\$0.03	\$0.05	\$0.43	\$3.69	\$6.94	\$21.53	\$72.92	\$138.89	\$266.67	\$311.05
100	\$0.04	\$0.07	\$0.63	\$5.31	\$10.00	\$31.00	\$105.00	\$200.00	\$384.00	\$605.08
72	\$0.06	\$0.10	\$0.87	\$7.38	\$13.89	\$43.06	\$145.83	\$277.78	\$533.33	\$1,118.21
64	\$0.07	\$0.11	\$0.98	\$8.30	\$15.63	\$48.44	\$164.06	\$312.50	\$600.00	\$1,397.52
62.5	\$0.07	\$0.11	\$1.00	\$8.50	\$16.00	\$49.60	\$168.00	\$320.00	\$614.40	\$1,461.92
50	\$0.09	\$0.14	\$1.25	\$10.63	\$20.00	\$62.00	\$210.00	\$400.00	\$768.00	\$2,238.89
32	\$0.13	\$0.22	\$1.95	\$16.60	\$31.25	\$96.88	\$328.13	\$625.00	\$1,200.00	\$5,306.58
24	\$0.18	\$0.29	\$2.60	\$22.14	\$41.67	\$129.17	\$437.50	\$833.33	\$1,600.00	\$9,307.93
16	\$0.27	\$0.43	\$3.91	\$33.20	\$62.50	\$193.75	\$656.25	\$1,250.00	\$2,400.00	\$20,659.34
10	\$0.43	\$0.69	\$6.25	\$53.13	\$100.00	\$310.00	\$1,050.00	\$2,000.00	\$3,840.00	\$52,343.61
8	\$0.54	\$0.86	\$7.81	\$66.41	\$125.00	\$387.50	\$1,312.50	\$2,500.00	\$4,800.00	\$81,503.40
6	\$0.72	\$1.15	\$10.42	\$88.54	\$166.67	\$516.67	\$1,750.00	\$3,333.33	\$6,400.00	\$144,390.93
4	\$1.08	\$1.73	\$15.63	\$132.81	\$250.00	\$775.00	\$2,625.00	\$5,000.00	\$9,600.00	\$323,745.62
2	\$2.15	\$3.45	\$31.25	\$265.63	\$500.00	\$1,550.00	\$5,250.00	\$10,000.00	\$19,200.00	\$1,290,446.56
1	\$4.30	\$6.90	\$62.50	\$531.25	\$1,000.00	\$3,100.00	\$10,500.00	\$20,000.00	\$38,400.00	\$5,152,714.40

ROLL YOUR OWN

These tables provide a reasonable assortment of coins for various precious metals, but what about oddities such as the Grand Halflings who use hardtack as hard currency? Or a strictly decimal system of coinage where 10 coppers are worth a silver and 10 silvers are worth a gold? What size are *those* coins?

Start with a coin weight and a material. Volume is weight divided by density, in appropriate units. Density values for a variety of materials are easily found on the Internet, though you're on your own for, say, mithril or Condensed Essence of Evil. Diameter is $2 \times \text{cube root of } ((T \times V)/(2 \times \pi))$, where T is the desired ratio of width to thickness (e.g., if coins are 12 times as wide as they are thick, T = 12) and V is volume.

Coin Sizes Table

Though most coins can be characterized as "small," exact size can matter when adventurers need to plug holes, wedge solid items into narrow cracks, or hit tiny targets. Below are diameter in inches (") and the corresponding SM for various coins by count/# and composition. Thickness is 1/12 to 1/14 of diameter. "Organics" includes bone, horn, ivory, and wood; "Hard Stone" covers marble, quartzite, and other heavy metamorphic rocks; and "Soft Stone" encompasses gypsum, soapstone, and other less dense, more easily carved minerals.

Count/#	Lead	Iron	Copper	Billon	Silver	Tumbaga	Electrum
260	0.537" (-12)	0.607" (-12)	0.581" (-12)	0.566" (-12)	0.552" (-12)	0.55" (-12)	0.491" (-13)
250	0.544" (-12)	0.615" (-12)	0.589" (-12)	0.573" (-12)	0.559" (-12)	0.557" (-12)	0.497" (-13)
240	0.552" (-12)	0.623" (-12)	0.597" (-12)	0.581" (-12)	0.566" (-12)	0.565" (-12)	0.504" (-12)
220	0.568" (-12)	0.642" (-12)	0.615" (-12)	0.598" (-12)	0.583" (-12)	0.581" (-12)	0.519" (-12)
200	0.586" (-12)	0.662" (-12)	0.634" (-12)	0.617" (-12)	0.602" (-12)	0.6" (-12)	0.535" (-12)
175	0.613" (-12)	0.692" (-11)	0.663" (-12)	0.645" (-12)	0.629" (-12)	0.627" (-12)	0.56" (-12)
144	0.654" (-12) 0.739" (-11)	0.739" (-11) 0.834" (-11)	0.708" (-11) 0.799" (-11)	0.689" (-11) 0.778" (-11)	0.672" (-11)	0.669" (-11) 0.756" (-11)	0.597" (-12) 0.675" (-11)
100 72	0.739 (-11) 0.824" (-11)	0.834 (-11) 0.931" (-11)	0.799 (-11) 0.892" (-11)	0.778 (-11) 0.868" (-11)	0.758" (-11) 0.846" (-11)	0.756 (-11) 0.843" (-11)	0.675 (-11)
64	0.857" (-11)	0.968" (-11)	0.928" (-11)	0.903" (-11)	0.840 (-11)	0.845 (-11)	0.783" (-11)
62.5	0.864" (-11)	0.908 (-11)	0.925" (-11)	0.903 (-11)	0.887" (-11)	0.884" (-11)	0.789" (-11)
50	0.93" (-11)	1.051" (-10)	1.007" (-10)	0.98" (-11)	0.956" (-11)	0.952" (-11)	0.85" (-11)
32	1.08" (-10)	1.22" (-10)	1.169" (-10)	1.137" (-10)	1.109" (-10)	1.105" (-10)	0.986" (-11)
24	1.188" (-10)	1.343" (-10)	1.286" (-10)	1.252" (-10)	1.22" (-10)	1.216" (-10)	1.086" (-10)
16	1.36" (-10)	1.537" (-9)	1.472" (-10)	1.433" (-10)	1.397" (-10)	1.393" (-10)	1.243" (-10)
10	1.591" (-9)	1.798" (-9)	1.722" (-9)	1.676" (-9)	1.634" (-9)	1.629" (-9)	1.453" (-10)
8	1.714" (-9)	1.937" (-9)	1.855" (-9)	1.805" (-9)	1.76" (-9)	1.754" (-9)	1.566" (-9)
6	1.886" (-9)	2.132" (-8)	2.042" (-8)	1.987" (-9)	1.937" (-9)	1.931" (-9)	1.723" (-9)
4	2.159" (-8)	2.44" (-8)	2.337" (-8)	2.274" (-8)	2.218" (-8)	2.211" (-8)	1.973" (-9)
2	2.721" (-8)	3.074" (-7)	2.945" (-8)	2.865" (-8)	2.794" (-8)	2.785" (-8)	2.485" (-8)
1	3.428" (-7)	3.873" (-7)	3.71" (-7)	3.61" (-7)	3.52" (-7)	3.509" (-7)	3.131" (-7)
Count/#	Gold	Platinum	Sapphire/Ruby	Organics	Porcelain	Hard Stone	Soft Stone
<i>Count/#</i> 260	0.45" (-13)	0.435" (-13)	0.761" (-11)	1.464" (-10)	0.901" (-11)	0.857" (-11)	0.945" (-11)
260 250	0.45" (-13) 0.456" (-13)	0.435" (-13) 0.441" (-13)	0.761" (-11) 0.771" (-11)	1.464" (-10) 1.483" (-10)	0.901" (-11) 0.913" (-11)	0.857" (-11) 0.868" (-11)	0.945" (-11) 0.958" (-11)
260 250 240	0.45" (-13) 0.456" (-13) 0.462" (-13)	0.435" (-13) 0.441" (-13) 0.447" (-13)	0.761" (-11) 0.771" (-11) 0.781" (-11)	1.464" (-10) 1.483" (-10) 1.504" (-9)	0.901" (-11) 0.913" (-11) 0.926" (-11)	0.857" (-11) 0.868" (-11) 0.88" (-11)	0.945" (-11) 0.958" (-11) 0.971" (-11)
260 250 240 220	0.45" (-13) 0.456" (-13) 0.462" (-13) 0.476" (-13)	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.548" (-9)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11)	0.857" (-11) 0.868" (-11) 0.88" (-11) 0.906" (-11)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11)
260 250 240 220 200	0.45" (-13) 0.456" (-13) 0.462" (-13) 0.476" (-13) 0.491" (-13)	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.548" (-9) 1.598" (-9)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11)	0.857" (-11) 0.868" (-11) 0.88" (-11) 0.906" (-11) 0.935" (-11)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10)
260 250 240 220 200 175	0.45" (-13) 0.456" (-13) 0.462" (-13) 0.476" (-13) 0.491" (-13) 0.513" (-12)	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.868" (-11)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.548" (-9) 1.598" (-9) 1.671" (-9)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10)	0.857" (-11) 0.868" (-11) 0.88" (-11) 0.906" (-11) 0.935" (-11) 0.977" (-11)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10)
260 250 240 220 200 175 144	0.45" (-13) 0.456" (-13) 0.462" (-13) 0.476" (-13) 0.491" (-13) 0.513" (-12) 0.548" (-12)	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13) 0.53" (-12)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.868" (-11) 0.926" (-11)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.548" (-9) 1.598" (-9) 1.671" (-9) 1.783" (-9)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.098" (-10)	0.857" (-11) 0.868" (-11) 0.88" (-11) 0.906" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10)
260 250 240 220 200 175 144 100	0.45" (-13) 0.456" (-13) 0.462" (-13) 0.476" (-13) 0.491" (-13) 0.513" (-12) 0.548" (-12) 0.619" (-12)	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13) 0.53" (-12) 0.598" (-12)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.868" (-11) 0.926" (-11) 1.046" (-10)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.548" (-9) 1.598" (-9) 1.671" (-9) 1.783" (-9) 2.013" (-8)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.098" (-10) 1.239" (-10)	0.857" (-11) 0.868" (-11) 0.906" (-11) 0.906" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10) 1.178" (-10)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10) 1.3" (-10)
260 250 240 220 200 175 144 100 72	0.45" (-13) 0.456" (-13) 0.462" (-13) 0.476" (-13) 0.491" (-13) 0.513" (-12) 0.548" (-12) 0.619" (-12) 0.69" (-11)	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13) 0.53" (-12) 0.598" (-12) 0.667" (-11)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.868" (-11) 0.926" (-11) 1.046" (-10) 1.167" (-10)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.548" (-9) 1.598" (-9) 1.671" (-9) 1.783" (-9) 2.013" (-8) 2.246" (-8)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.098" (-10) 1.239" (-10) 1.383" (-10)	0.857" (-11) 0.868" (-11) 0.906" (-11) 0.906" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10) 1.178" (-10) 1.314" (-10)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10) 1.3" (-10) 1.451" (-10)
260 250 240 220 200 175 144 100 72 64	$\begin{array}{c} 0.45" (-13) \\ 0.456" (-13) \\ 0.462" (-13) \\ 0.476" (-13) \\ 0.491" (-13) \\ 0.513" (-12) \\ 0.548" (-12) \\ 0.619" (-12) \\ 0.69" (-11) \\ 0.718" (-11) \end{array}$	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13) 0.53" (-12) 0.598" (-12) 0.667" (-11) 0.694" (-11)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.868" (-11) 0.926" (-11) 1.046" (-10) 1.167" (-10) 1.214" (-10)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.548" (-9) 1.598" (-9) 1.671" (-9) 1.783" (-9) 2.013" (-8) 2.246" (-8) 2.336" (-8)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.239" (-10) 1.383" (-10) 1.438" (-10)	0.857" (-11) 0.868" (-11) 0.906" (-11) 0.906" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10) 1.178" (-10) 1.314" (-10) 1.367" (-10)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10) 1.3" (-10) 1.451" (-10) 1.509" (-9)
260 250 240 220 200 175 144 100 72 64 62.5	$\begin{array}{c} 0.45" (-13) \\ 0.456" (-13) \\ 0.462" (-13) \\ 0.476" (-13) \\ 0.491" (-13) \\ 0.513" (-12) \\ 0.548" (-12) \\ 0.619" (-12) \\ 0.69" (-11) \\ 0.718" (-11) \\ 0.724" (-11) \\ \end{array}$	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13) 0.53" (-12) 0.598" (-12) 0.667" (-11) 0.694" (-11) 0.699" (-11)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.926" (-11) 1.046" (-10) 1.167" (-10) 1.214" (-10) 1.223" (-10)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.548" (-9) 1.598" (-9) 1.671" (-9) 1.783" (-9) 2.013" (-8) 2.246" (-8) 2.336" (-8) 2.355" (-8)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.239" (-10) 1.383" (-10) 1.438" (-10) 1.45" (-10)	0.857" (-11) 0.868" (-11) 0.906" (-11) 0.906" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10) 1.178" (-10) 1.314" (-10) 1.367" (-10) 1.378" (-10)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10) 1.3" (-10) 1.451" (-10) 1.509" (-9) 1.521" (-9)
$\begin{array}{c} 260\\ 250\\ 240\\ 220\\ 200\\ 175\\ 144\\ 100\\ 72\\ 64\\ 62.5\\ 50\\ \end{array}$	$\begin{array}{c} 0.45" (-13) \\ 0.456" (-13) \\ 0.462" (-13) \\ 0.476" (-13) \\ 0.491" (-13) \\ 0.513" (-12) \\ 0.548" (-12) \\ 0.619" (-12) \\ 0.69" (-11) \\ 0.718" (-11) \\ 0.724" (-11) \\ 0.78" (-11) \\ \end{array}$	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13) 0.53" (-12) 0.598" (-12) 0.667" (-11) 0.694" (-11) 0.699" (-11) 0.753" (-11)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.926" (-11) 1.046" (-10) 1.167" (-10) 1.214" (-10) 1.223" (-10) 1.318" (-10)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.598" (-9) 1.598" (-9) 1.671" (-9) 1.783" (-9) 2.013" (-8) 2.246" (-8) 2.336" (-8) 2.355" (-8) 2.537" (-8)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.098" (-10) 1.239" (-10) 1.383" (-10) 1.438" (-10) 1.45" (-10) 1.562" (-9)	0.857" (-11) 0.868" (-11) 0.906" (-11) 0.935" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10) 1.314" (-10) 1.367" (-10) 1.378" (-10) 1.484" (-10)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10) 1.3" (-10) 1.451" (-10) 1.509" (-9) 1.521" (-9) 1.638" (-9)
260 250 240 220 200 175 144 100 72 64 62.5	$\begin{array}{c} 0.45" (-13) \\ 0.456" (-13) \\ 0.462" (-13) \\ 0.476" (-13) \\ 0.491" (-13) \\ 0.513" (-12) \\ 0.548" (-12) \\ 0.619" (-12) \\ 0.69" (-11) \\ 0.718" (-11) \\ 0.724" (-11) \\ 0.78" (-11) \\ 0.905" (-11) \\ \end{array}$	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13) 0.53" (-12) 0.598" (-12) 0.667" (-11) 0.694" (-11) 0.699" (-11) 0.753" (-11) 0.874" (-11)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.926" (-11) 1.046" (-10) 1.167" (-10) 1.214" (-10) 1.223" (-10) 1.318" (-10) 1.529" (-9)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.548" (-9) 1.598" (-9) 1.671" (-9) 1.783" (-9) 2.013" (-8) 2.246" (-8) 2.336" (-8) 2.355" (-8) 2.537" (-8) 2.944" (-8)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.098" (-10) 1.239" (-10) 1.383" (-10) 1.438" (-10) 1.45" (-10) 1.562" (-9) 1.812" (-9)	0.857" (-11) 0.868" (-11) 0.906" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10) 1.314" (-10) 1.367" (-10) 1.378" (-10) 1.484" (-10) 1.722" (-9)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10) 1.3" (-10) 1.451" (-10) 1.509" (-9) 1.521" (-9) 1.638" (-9) 1.901" (-9)
$\begin{array}{c} 260\\ 250\\ 240\\ 220\\ 200\\ 175\\ 144\\ 100\\ 72\\ 64\\ 62.5\\ 50\\ 32\\ \end{array}$	$\begin{array}{c} 0.45" (-13) \\ 0.456" (-13) \\ 0.462" (-13) \\ 0.476" (-13) \\ 0.491" (-13) \\ 0.513" (-12) \\ 0.548" (-12) \\ 0.619" (-12) \\ 0.69" (-11) \\ 0.718" (-11) \\ 0.724" (-11) \\ 0.78" (-11) \\ \end{array}$	$\begin{array}{c} 0.435" (-13) \\ 0.441" (-13) \\ 0.447" (-13) \\ 0.46" (-13) \\ 0.475" (-13) \\ 0.496" (-13) \\ 0.53" (-12) \\ 0.598" (-12) \\ 0.667" (-11) \\ 0.694" (-11) \\ 0.694" (-11) \\ 0.699" (-11) \\ 0.753" (-11) \\ 0.874" (-11) \\ 0.962" (-11) \\ 1.101" (-10) \end{array}$	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.926" (-11) 1.046" (-10) 1.167" (-10) 1.214" (-10) 1.223" (-10) 1.318" (-10)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.598" (-9) 1.598" (-9) 1.671" (-9) 1.783" (-9) 2.013" (-8) 2.246" (-8) 2.336" (-8) 2.355" (-8) 2.537" (-8) 2.944" (-8) 3.24" (-7) 3.709" (-7)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.098" (-10) 1.239" (-10) 1.383" (-10) 1.438" (-10) 1.45" (-10) 1.562" (-9)	0.857" (-11) 0.868" (-11) 0.906" (-11) 0.935" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10) 1.314" (-10) 1.367" (-10) 1.378" (-10) 1.484" (-10)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10) 1.3" (-10) 1.451" (-10) 1.509" (-9) 1.521" (-9) 1.638" (-9)
$\begin{array}{c} 260\\ 250\\ 240\\ 220\\ 200\\ 175\\ 144\\ 100\\ 72\\ 64\\ 62.5\\ 50\\ 32\\ 24\\ \end{array}$	$\begin{array}{c} 0.45" (-13) \\ 0.456" (-13) \\ 0.462" (-13) \\ 0.476" (-13) \\ 0.491" (-13) \\ 0.513" (-12) \\ 0.513" (-12) \\ 0.548" (-12) \\ 0.619" (-12) \\ 0.69" (-11) \\ 0.718" (-11) \\ 0.724" (-11) \\ 0.78" (-11) \\ 0.995" (-11) \\ 0.996" (-11) \\ 1.14" (-10) \\ 1.333" (-10) \end{array}$	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13) 0.53" (-12) 0.598" (-12) 0.667" (-11) 0.694" (-11) 0.694" (-11) 0.753" (-11) 0.874" (-11) 0.962" (-11) 1.101" (-10) 1.288" (-10)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.868" (-11) 0.926" (-11) 1.046" (-10) 1.214" (-10) 1.214" (-10) 1.223" (-10) 1.318" (-10) 1.529" (-9) 1.683" (-9) 1.926" (-9) 2.253" (-8)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.548" (-9) 1.598" (-9) 1.671" (-9) 1.783" (-9) 2.013" (-8) 2.246" (-8) 2.355" (-8) 2.537" (-8) 2.944" (-8) 3.24" (-7) 3.709" (-7) 4.338" (-7)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.098" (-10) 1.239" (-10) 1.438" (-10) 1.438" (-10) 1.45" (-10) 1.562" (-9) 1.812" (-9) 1.994" (-9) 2.283" (-8) 2.67" (-8)	0.857" (-11) 0.868" (-11) 0.906" (-11) 0.935" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10) 1.314" (-10) 1.367" (-10) 1.378" (-10) 1.484" (-10) 1.722" (-9) 1.895" (-9) 2.17" (-8) 2.538" (-8)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10) 1.3" (-10) 1.451" (-10) 1.509" (-9) 1.521" (-9) 1.638" (-9) 1.901" (-9) 2.092" (-8)
$\begin{array}{c} 260\\ 250\\ 240\\ 220\\ 200\\ 175\\ 144\\ 100\\ 72\\ 64\\ 62.5\\ 50\\ 32\\ 24\\ 16\\ \end{array}$	$\begin{array}{c} 0.45" (-13) \\ 0.456" (-13) \\ 0.462" (-13) \\ 0.462" (-13) \\ 0.476" (-13) \\ 0.513" (-12) \\ 0.513" (-12) \\ 0.548" (-12) \\ 0.619" (-12) \\ 0.69" (-11) \\ 0.718" (-11) \\ 0.724" (-11) \\ 0.7905" (-11) \\ 0.996" (-11) \\ 1.14" (-10) \\ 1.333" (-10) \\ 1.436" (-10) \\ \end{array}$	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13) 0.53" (-12) 0.598" (-12) 0.667" (-11) 0.694" (-11) 0.699" (-11) 0.753" (-11) 0.874" (-11) 0.962" (-11) 1.101" (-10) 1.288" (-10)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.868" (-11) 0.926" (-11) 1.046" (-10) 1.214" (-10) 1.214" (-10) 1.223" (-10) 1.318" (-10) 1.529" (-9) 1.683" (-9) 1.926" (-9) 2.253" (-8) 2.427" (-8)	1.464" (-10) 1.483" (-10) 1.504" (-9) 1.548" (-9) 1.598" (-9) 1.671" (-9) 1.783" (-9) 2.013" (-8) 2.246" (-8) 2.355" (-8) 2.537" (-8) 2.944" (-8) 3.24" (-7) 3.709" (-7) 4.338" (-7) 4.673" (-7)	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.098" (-10) 1.239" (-10) 1.383" (-10) 1.438" (-10) 1.45" (-10) 1.45" (-10) 1.562" (-9) 1.812" (-9) 1.994" (-9) 2.283" (-8) 2.67" (-8) 2.877" (-8)	0.857" (-11) 0.868" (-11) 0.906" (-11) 0.906" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10) 1.378" (-10) 1.378" (-10) 1.378" (-10) 1.484" (-10) 1.722" (-9) 1.895" (-9) 2.17" (-8) 2.538" (-8) 2.734" (-8)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10) 1.451" (-10) 1.509" (-9) 1.521" (-9) 1.638" (-9) 1.901" (-9) 2.092" (-8) 2.395" (-8) 2.801" (-8) 3.017" (-7)
$\begin{array}{c} 260\\ 250\\ 240\\ 220\\ 200\\ 175\\ 144\\ 100\\ 72\\ 64\\ 62.5\\ 50\\ 32\\ 24\\ 16\\ 10\\ 8\\ 6\end{array}$	$\begin{array}{c} 0.45" (-13) \\ 0.456" (-13) \\ 0.462" (-13) \\ 0.462" (-13) \\ 0.476" (-13) \\ 0.513" (-12) \\ 0.513" (-12) \\ 0.548" (-12) \\ 0.619" (-12) \\ 0.69" (-11) \\ 0.78" (-11) \\ 0.78" (-11) \\ 0.905" (-11) \\ 0.996" (-11) \\ 1.14" (-10) \\ 1.333" (-10) \\ 1.436" (-10) \\ 1.58" (-9) \end{array}$	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13) 0.53" (-12) 0.598" (-12) 0.667" (-11) 0.694" (-11) 0.699" (-11) 0.753" (-11) 0.874" (-11) 0.962" (-11) 1.101" (-10) 1.288" (-10) 1.527" (-9)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.926" (-11) 1.046" (-10) 1.167" (-10) 1.214" (-10) 1.223" (-10) 1.318" (-10) 1.529" (-9) 1.683" (-9) 1.926" (-9) 2.253" (-8) 2.427" (-8) 2.671" (-8)	$\begin{array}{c} 1.464" (-10) \\ 1.483" (-10) \\ 1.504" (-9) \\ 1.504" (-9) \\ 1.598" (-9) \\ 1.598" (-9) \\ 1.671" (-9) \\ 1.783" (-9) \\ 2.013" (-8) \\ 2.246" (-8) \\ 2.355" (-8) \\ 2.355" (-8) \\ 2.537" (-8) \\ 2.944" (-7) \\ 3.709" (-7) \\ 4.338" (-7) \\ 4.673" (-7) \\ 5.143" (-6) \end{array}$	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.098" (-10) 1.239" (-10) 1.383" (-10) 1.438" (-10) 1.45" (-10) 1.45" (-10) 1.812" (-9) 1.994" (-9) 2.283" (-8) 2.67" (-8) 2.877" (-8) 3.166" (-7)	0.857" (-11) 0.868" (-11) 0.868" (-11) 0.906" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10) 1.378" (-10) 1.378" (-10) 1.378" (-10) 1.484" (-10) 1.722" (-9) 1.895" (-9) 2.17" (-8) 2.538" (-8) 2.734" (-8) 3.009" (-7)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10) 1.451" (-10) 1.521" (-9) 1.521" (-9) 1.638" (-9) 1.901" (-9) 2.092" (-8) 2.395" (-8) 2.801" (-8) 3.017" (-7) 3.321" (-7)
$\begin{array}{c} 260\\ 250\\ 240\\ 220\\ 200\\ 175\\ 144\\ 100\\ 72\\ 64\\ 62.5\\ 50\\ 32\\ 24\\ 16\\ 10\\ 8\\ 6\\ 4\\ \end{array}$	$\begin{array}{c} 0.45" (-13) \\ 0.456" (-13) \\ 0.462" (-13) \\ 0.462" (-13) \\ 0.476" (-13) \\ 0.491" (-13) \\ 0.513" (-12) \\ 0.548" (-12) \\ 0.619" (-12) \\ 0.69" (-11) \\ 0.78" (-11) \\ 0.78" (-11) \\ 0.905" (-11) \\ 0.996" (-11) \\ 1.14" (-10) \\ 1.333" (-10) \\ 1.436" (-10) \\ 1.58" (-9) \\ 1.809" (-9) \end{array}$	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13) 0.53" (-12) 0.598" (-12) 0.667" (-11) 0.694" (-11) 0.699" (-11) 0.753" (-11) 0.874" (-11) 0.962" (-11) 1.101" (-10) 1.288" (-10) 1.527" (-9) 1.748" (-9)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.868" (-11) 0.926" (-11) 1.046" (-10) 1.167" (-10) 1.214" (-10) 1.223" (-10) 1.318" (-10) 1.318" (-10) 1.529" (-9) 1.683" (-9) 1.926" (-9) 2.253" (-8) 2.427" (-8) 2.671" (-8) 3.058" (-7)	$\begin{array}{c} 1.464" (-10) \\ 1.483" (-10) \\ 1.504" (-9) \\ 1.504" (-9) \\ 1.598" (-9) \\ 1.598" (-9) \\ 1.671" (-9) \\ 1.783" (-9) \\ 2.013" (-8) \\ 2.246" (-8) \\ 2.336" (-8) \\ 2.355" (-8) \\ 2.355" (-8) \\ 2.537" (-8) \\ 2.944" (-7) \\ 3.709" (-7) \\ 4.338" (-7) \\ 4.673" (-7) \\ 5.143" (-6) \\ 5.887" (-6) \end{array}$	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.098" (-10) 1.239" (-10) 1.383" (-10) 1.438" (-10) 1.45" (-10) 1.45" (-10) 1.562" (-9) 1.994" (-9) 2.283" (-8) 2.67" (-8) 2.877" (-8) 3.166" (-7) 3.624" (-7)	0.857" (-11) 0.868" (-11) 0.906" (-11) 0.906" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10) 1.314" (-10) 1.367" (-10) 1.378" (-10) 1.484" (-10) 1.722" (-9) 1.895" (-9) 2.17" (-8) 2.538" (-8) 2.734" (-8) 3.009" (-7) 3.444" (-7)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10) 1.451" (-10) 1.521" (-9) 1.521" (-9) 1.638" (-9) 1.901" (-9) 2.092" (-8) 2.395" (-8) 2.801" (-8) 3.017" (-7) 3.801" (-7)
$\begin{array}{c} 260\\ 250\\ 240\\ 220\\ 200\\ 175\\ 144\\ 100\\ 72\\ 64\\ 62.5\\ 50\\ 32\\ 24\\ 16\\ 10\\ 8\\ 6\end{array}$	$\begin{array}{c} 0.45" (-13) \\ 0.456" (-13) \\ 0.462" (-13) \\ 0.462" (-13) \\ 0.476" (-13) \\ 0.513" (-12) \\ 0.513" (-12) \\ 0.548" (-12) \\ 0.619" (-12) \\ 0.69" (-11) \\ 0.78" (-11) \\ 0.78" (-11) \\ 0.905" (-11) \\ 0.996" (-11) \\ 1.14" (-10) \\ 1.333" (-10) \\ 1.436" (-10) \\ 1.58" (-9) \end{array}$	0.435" (-13) 0.441" (-13) 0.447" (-13) 0.46" (-13) 0.475" (-13) 0.496" (-13) 0.53" (-12) 0.598" (-12) 0.667" (-11) 0.694" (-11) 0.699" (-11) 0.753" (-11) 0.874" (-11) 0.962" (-11) 1.101" (-10) 1.288" (-10) 1.527" (-9)	0.761" (-11) 0.771" (-11) 0.781" (-11) 0.804" (-11) 0.83" (-11) 0.926" (-11) 1.046" (-10) 1.167" (-10) 1.214" (-10) 1.223" (-10) 1.318" (-10) 1.529" (-9) 1.683" (-9) 1.926" (-9) 2.253" (-8) 2.427" (-8) 2.671" (-8)	$\begin{array}{c} 1.464" (-10) \\ 1.483" (-10) \\ 1.504" (-9) \\ 1.504" (-9) \\ 1.598" (-9) \\ 1.598" (-9) \\ 1.671" (-9) \\ 1.783" (-9) \\ 2.013" (-8) \\ 2.246" (-8) \\ 2.355" (-8) \\ 2.355" (-8) \\ 2.537" (-8) \\ 2.944" (-7) \\ 3.709" (-7) \\ 4.338" (-7) \\ 4.673" (-7) \\ 5.143" (-6) \end{array}$	0.901" (-11) 0.913" (-11) 0.926" (-11) 0.953" (-11) 0.984" (-11) 1.029" (-10) 1.098" (-10) 1.239" (-10) 1.383" (-10) 1.438" (-10) 1.45" (-10) 1.45" (-10) 1.812" (-9) 1.994" (-9) 2.283" (-8) 2.67" (-8) 2.877" (-8) 3.166" (-7)	0.857" (-11) 0.868" (-11) 0.868" (-11) 0.906" (-11) 0.935" (-11) 0.977" (-11) 1.043" (-10) 1.378" (-10) 1.378" (-10) 1.378" (-10) 1.484" (-10) 1.722" (-9) 1.895" (-9) 2.17" (-8) 2.538" (-8) 2.734" (-8) 3.009" (-7)	0.945" (-11) 0.958" (-11) 0.971" (-11) 1" (-11) 1.032" (-10) 1.079" (-10) 1.151" (-10) 1.451" (-10) 1.521" (-9) 1.521" (-9) 1.638" (-9) 1.901" (-9) 2.092" (-8) 2.395" (-8) 2.801" (-8) 3.017" (-7) 3.321" (-7)

Other Material Values

A number of materials have values which may be based on those discussed so far:

• *Bronze* and *brass* coins weigh essentially the same as copper ones (no more than 3% less) and have the same value.

• *Orichalcum* coins weigh the same as copper ones but are worth 30 times as much.

• *Meteoric iron* coins weigh the same as iron ones but are worth 20 times as much.

Most of the other materials listed in *Composition* (pp. 4-5) have trivial inherent value, limiting their use to fiat money which can be spent only in suitable jurisdictions. There may be exceptions for particularly exotic materials – e.g., coins carved

Coin! Coin! – Dr. Najib, in **Scooby Doo, Where Are You!** #112

from ivory or rare wood might circulate at high value – but the value of such things is nearly always at the GM's discretion. That goes double for the weird currencies of exotic races: souls trapped in coin-like casings and exchanged as money in Hell, carved ice rupees used by frost giants, florins minted from pure darkness by Things Man Was Not Meant To Know, and so on.

"How BIG Is IT?"

For visual reference, here are the sizes of a number of U.S. coins:

Denomination	Diameter	Denomination	Diameter
Penny	0.75"	Quarter	0.955"
Nickel	0.835"	Half Dollar	1.20"
Dime	0.705"	One Dollar	1.043"

A penny is about the size of a 100/# billon, silver, or tumbaga, 72/# electrum, or 50/# platinum coin. A nickel is the size of a 72/# silver or tumbaga, or 50/# electrum coin. A dime is the size of a 144/# copper or billon, 64/# gold, or 62.5/# platinum coin. A quarter is the size of a 50/# silver or tumbaga, or 24/# platinum coin. A half-dollar is the size of a 24/# silver or tumbaga coin, and a dollar coin is about the size of a 50/# iron coin.

Exact Coin Weights

Delvers dealing with traps detecting subtle changes in weight could do worse than to use recently minted gold (and, plausibly, platinum) coins to measure small weights. Such coins were historically minted to exacting conditions, ensuring that no more or less of the precious material was used than necessary, and recent issues are less likely to be worn down or clipped. Coins of lesser metals have greater variation in individual weights, being minted to aggregate weights. That is, if a bag of 250 copper pieces with a nominal weight of a pound does in fact weigh a pound, the mint is probably happy to send them out, even if several individual coins weigh a tenth of a gram more or less. Gold coins, though, are very likely to weigh almost exactly 1.814 grams each.

Big Money

Coins weighing more than an ounce were exceptionally rare historically but are rather more common in fantasy games. Big coins may be a consequence of large supplies of precious metal, the demands of extensive commerce, a desire by royal mints to issue more impressive currency than their neighbors, or the needs of giants and other large races. (The presence of magic makes all of these more likely in various ways: flying ships accelerating commerce, magical geese laying vast quantities of gold, and so on.)

Though not necessarily issued as official currency, standardized metal ingots were used as trade goods in the real world. Medieval Slavic countries developed the *grzywna*, a silver bar weighing about 0.45 lb. with a value of \$450. The Chinese used *yuanbao* or *sycee*, ingots of gold and silver in standardized weights ranging from 1.5 oz. to 4.5 lbs. As these were frequently privately minted, there was little standardization in shape, but stylized boats, cups, and double axes were common.

Some currency schemes involve huge units which never actually existed physically. The best-known example is the English pound, which was originally a unit only used in accounting. Its value was that of 240 silver pennies, weighing a pound (though a pound of 328 to 373 grams, rather than the avoirdupois pound of 454 grams). However, there was never a historical one-pound silver coin; only gold coins of equivalent value but much lower weight were ever minted, and for centuries not even those existed. England and parts of continental Europe also used the *mark*, about 2/3 of a pound, as an accounting unit but not a coin.

The *talent*, a measure used throughout the ancient Mediterranean and Near East, was a similar unit of account. The classical talent was a weight equal to that of the water needed to fill a typical amphora: 60 to 70 lbs. A 60-lb. copper talent, worth \$3,750, would be over 14 inches across, the size of a large serving platter; a silver talent coin (\$60,000), just shy of 14 inches; and a gold one (\$1,200,000), a bit over 11 inches. Thickness would range from a little over an inch for copper to a little under an inch for gold. This is also about the weight of semi-standardized metal ingots used as trade goods in the Bronze Age.

The biggest money of all, however, is real pieces of currency (or at least something *like* currency) – though they're far more than pocket change. *Rai* "coins" of the Yap islands are large stone disks used

in important transactions: real estate, settling marriages, and so on. The smallest are only a few inches across and weigh as little as a pound or two; the largest are up to 12 feet across and weigh eight tons. Many are made with a hole in the middle, much like Chinese cash, so they can be picked up and carried by a log run through the center. However, owners often don't bother moving them when they change hands; they're treated more like pieces of architecture or landed property. In addition to acting as currency, these huge stone coins might have mystical properties. Large, venerable rai which partake of long and complicated histories may be sources of mana, provide supernatural protection, act as conduits to contact ancient spirits, or serve as suitable bribes for gods.

Really Big Money

Rai not big enough for you? Adventurers might encounter the coins of titans, used as roofs of far-off temples or the foundations of small islands. Finding them may be relative easy, but getting at currency better described as architecture or real estate than as pocket change is a serious challenge. And if the *world* is a flat disk supported on the backs of elephants, the music of the spheres may be the jingling of coins in a purse!

SHAPE AND TREATMENT

Coins' shape and appearance are less immediately important to treasure-hunters but can have their own significance.

Shape

The vast majority of coins are round, a natural shape for a standardized lump of metal smashed flat with a die, but that isn't the only option! Many early coins, and any number of lower-denomination later ones which weren't lavished with great care, were lumpy and lopsided. Other coins were noncircular on purpose. For example, India saw several octagonal *rupees* and Japan had the oval gold *ryō*. Early China experimented with a variety of coin shapes, including knife money (which might resemble a stylized pointed knife, a blunt cleaver, or even a door key) and spade money (which started out resembling a shovel blade but evolved into a forked pattern reminiscent of a gatehouse). A number of coins – including English pennies and Spanish dollars – were subject to cutting into pie-shaped wedges for smaller transactions, and pieces of coins derived from a circular shape circulated as easily as whole coins.

When a random noncircular coin is desired, roll on the *Coin Shape Table*. All noncircular coins give -2 to Counterfeiting (*Debasing Coin*, **Dungeons**, p. 4).

Coin Shape Table

Roll 1d, 1d.

Roll	Shape	Notes
1-2, 1-2	Oval	
1-2, 3-4	Crescent	
1-2, 5-6	Semicircle	
3-4, 1-2	Knife/Key	
3-4, 3-4	Spade	
3-4, 5-6	Fan	
5-6, 1-2	Polygonal	[1]
5-6, 3-4	Scalloped/Lobed	[2]
5-6, 5-6	Wedge	

Notes

[1] Rather than being round, the coin has 1d+2 straight sides.

[2] Like a polygonal coin, the coin has distinct sides, but they're lobed or scalloped arcs rather than straight lines. Roll 1d+2 for the number of arcs.

Condition

Coins can exhibit a number of other conditions in addition to gross shape. Some are a result of their initial manufacture. *Rough* coins are essentially blobs of metal with a face stamped into them, but the design is crude and the body of the coin itself is irregularly shaped. It's a bit easier to get away with shaving down rough coins: +2 to Counterfeiting. *Cupped* coins are struck in a slightly concave shape, making them easier to stack.

Clipped coins are *visibly* clipped. Merchants and tradesmen are suspicious of anyone using them, and react at -2 to those trying to spend them. Moreover, such coins give -4 to Counterfeiting rolls – clipping them further is just asking for trouble!

Circulating coins are subject to incidental wear from use as well as intentional abuse from clipping. Coins may also be *marked:* struck with a punch to make sure the coin is precious metal throughout rather than simply plated. Marks may be used to make coins identifiable for other purposes, too; e.g., an owner might mark a few particularly valuable coins to establish ownership if they are later stolen and recovered.

MAGIC COIN TRICKS

Coins, particularly high-denomination ones, make excellent power items. For example, a large gold or platinum coin is worth a great deal, so it can store a lot of energy. It also isn't used as equipment (and thus is rarely exposed to hazards) and doesn't weigh much (and so doesn't pose encumbrance problems). On the downside, coins are easy to steal or simply to drop inadvertently.

Coins can also be more directly magical. Here are a few examples of coin-related enchantment.

Guessing Coin

When you can't figure out the right thing to do, you can always flip a coin. This magical item is a particularly good aid to guessing – except when it's not. When choosing between two possibilities, this coin functions as the Intuition advantage, using IQ 13 instead of the user's own IQ. \$15,000, negligible weight.

Lucky Coin

Once per day, this coin can be flipped as an omen. If it comes up heads, the user's luck increases by one step for the remainder of the day: a person who suffers from Unluckiness loses the disadvantage, one with no luck-related traits gains Luck, and so on. Someone with Ridiculous Luck receives no extra benefit. However, if it comes up tails, luck *decreases* by a step, with no further penalty for those with Unluckiness. \$7,500, negligible weight.

Twins of Felonious Displacement

This item – greatly beloved of thieves – consists of a matched pair of coins. Many versions exist, ranging from small battered coppers to large gold pieces. The user may give one of the pair away, spend it, or otherwise dispose of it. However, when an inscription on the coin is read, the other member of the pair immediately teleports itself next to its mate. What makes is so useful is that the returning coin will also bring along any solid objects which are entirely within three inches of it! This is usually more than enough to bring back any other coins with which it may have been sharing a purse, but clever rogues can find other uses. If the coin to be teleported is in someone else's possession, roll a Quick Contest of Will; the winner ends up with both coins. \$10,000, negligible weight.

Money Armor

The ultimate in showy armor, this is a scale armor hauberk with the scales replaced with silver coins. In addition to providing its usual protection (DR 4), it temporarily provides up to an *additional* DR 2 for each hit. With each point of damage thus absorbed, though, silver coins transform into low-value copper and bronze ones. The armor can absorb a total of 16 points of damage before becoming entirely bronze, at which point its magic becomes dormant. However, the wearer can replace the copper coins with his own silver ones, "recharging" the armor at a cost of \$2,000 per point of damage; this requires a successful Armoury (Body Armor) roll. \$38,000, 35 lbs.

Rumor has it that there are gold versions which can absorb up to *320* points of damage. If found, such a hauberk would be worth around \$700,000.

COMBAT COINS

Coins are hard and heavy, and in several societies, batches of them were collected and traded as a unit. This makes it possible if ostentatious to use them in weapons. For example, the Romans and Byzantines would seal pre-counted batches of coins into a tightly sewn leather purse and treat the whole thing as a single unit of currency (in fact, the coins involved, the *follis*, took their name from the word for "purse"). A heavy material wrapped up in an easily manipulated bundle is also a good description of a blackjack (p. B271). Indeed, a blackjack might be a utilitarian way of secretly carrying high-denomination coins or just raw precious metal like gold dust. Pierced coins on a particularly long string, or perhaps a thin chain, might likewise be used as the business end of a flail or a morningstar.

A coin-based weapon would have no advantage in combat, but it's undeniably stylish. Increase the price of such a weapon by the precious metal cost of half of its weight; e.g., for a 6-lb. morningstar with a head made from gold coins, add the value of three pounds of gold, or \$60,000. This extra expense *definitely* counts toward bonuses for ornate gear!

Sharpened Coins

Sneaky types might instead sharpen the edges of coins to create concealable weapons. As a practical matter, only 10/# or heavier coins can be used this way.

A handful of sharpened coins placed between the fingers can be used as a small melee weapon with the Brawling skill. This gives +1 to punching damage. The user suffers from Ham-Fisted 1 (p. B138) while doing so, though – keeping coins between fingers is tricky!

Such coins may also be thrown using Thrown Weapon (Shuriken); see table below for game details.

Coins that aren't heavy enough to make decent weapons can still serve as light-duty cutting tools, useful for sawing through ropes and slicing light fabrics. A sharpened coin weighing less than 10/# can do thr-1(0.5) cut in this capacity.

THROWN WEAPON (SHURIKEN) (DX-4 or Throwing-2)										
Weapon	Damage	Acc	Range	Weight	RoF	Shots	Cost	ST	Bulk	
Sharpened Coin	thr-2 cut	1	×0.5/×1	varies	1	T(1)	\$1 + coin	5	0	

Pierced coins have a hole in them, useful for stringing together batches for easy circulation of large sums. This can be done to coins in circulation, but some civilizations do it at the mint. The owner of a string of coins can tie it to his belt or something else attached to him, giving -4 to Pickpocket. Pierced coins can also be attached to armor as decorative buttons and ornaments. An especially extravagant use would be to turn them into scale armor (for an example, see *Money Armor*, p. 9).

Particularly worn coins are sometimes recycled. *Overstrike* is the practice of stamping a new image onto an older coin, treating the old coin as a blank. Previous features of the coin are frequently visible, however.

A few modifications even have adventuring uses. *Sharpened* coins can be used as concealed weapons and tools (see *Combat Coins*, above). *Hollow* coins look like regular currency but are actually very small containers. They can hold no more than a tiny slip of paper, pinch of magic dust, dose of poison, or the like – but sometimes that's enough.

Roll on the *Coin Condition Table* to pick a coin's condition at random.

Coin Condition Table

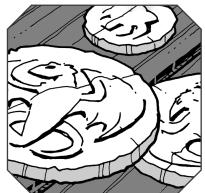
Roll 1d, 1d.

Roll	Condition	Roll	Condition
1-2, 1-2	Rough	3-4, 5-6	Cupped
1-2, 3-4	Worn	5-6, 1-2	Hollow*
1-2, 5-6	Clipped	5-6, 3-4	Sharpened*
3-4, 1-2	Marked	5-6, 5-6	Overstrike
3-4, 3-4	Pierced		

* The GM may want to reroll these results for coins smaller than an inch across.

Decoration

The last notable aspect of a coin's condition is its decoration. The whole point of coinage is to have readily used bits of precious metal given an official stamp of approval to identify quantity, purity, and issuer. While adventurers mostly care about



size and purity, what makes coins most recognizable is the designs stamped on the front and back.

To determine the decoration on a given coin, the GM may roll *twice* for decorative motifs (*Motifs*, pp. 13-15), once for each side. However, it's worth considering a limited set of attributes for at least one side. A coin frequently identifies its denomination, the issuing ruler, and/or some symbol of the issuing nation (e.g., a patron deity or a prominent symbol of a foundational myth). The ruler and the symbol are typically depicted visually (putting the King's face in every pocket is great propaganda), but for philosophical or technical reasons, text may be used instead. For example, some interpretations of Islam frown on depictions of people, so a number of medieval Islamic coins had the issuing ruler's name inscribed along with Quranic verse. Of course, this means the source of any given coin is identifiable, at least in theory, and subject to the same kinds of reputations and reactions which affect other items; see *Advanced Social Studies* (pp. 19-20). For example, people may be reluctant to accept coins issued by the Expansionist Necromantic Empire, believing them cursed, while giving less scrutiny to entire bags of coins from the City-State of the Reliable Merchant-Princes. Problematic coins can be turned into unidentifiable lumps of metal without much trouble, though there's usually a bit of loss. A roll against Alchemy, Counterfeiting, Jeweler, or Smith can accomplish this, but the aggregate batch of metal loses 1d+(margin of failure, if any)% of its total value. The Shape Metal spell can do the same thing without loss.

FOLDING MONEY

Money in *Dungeon Fantasy* is usually hard, shiny, inherently valuable, and potentially heavy – but it doesn't *have* to be. People in both medieval Europe and China, unhappy with the prospect of carrying around all those heavy and insecure sacks of coin, invented promissory notes: easily carried (500 notes weigh 1 lb.) documents representing ownership of actual valuables stored securely elsewhere. Governments eventually got in on the act, issuing paper money representing substantial sums of precious metal said to be kept in government vaults. That's great for merchants and governments, but not so good for adventurers, who can come across a nicely portable treasure which has a high face value but can't be cashed in conveniently.

Paper money is always high value, standing in for monetary values from a minimum of \$500 to potentially tens of thousands of \$. However, it has three major drawbacks:

• Not everybody will recognize it as treasure. To barbarians and the illiterate, paper money looks like any other written document. Even literate delvers might not recognize its value if it's written in the wrong language; use the *Text Language Table* (*Treasure Tables*, p. 28) to determine language. More valuable notes are created with greater care and elaboration, however. Use the *Text Properties Table* (*Treasure Tables*, p. 27) as a guideline – if the material or treatment has a positive CF, that sets the note's minimum value in thousands of \$. For example, a lacquered note (+4 CF) is worth at least \$4,000.

• It's hard to spend. Paper money may be either private or public. A private note is issued by a particular merchant house, banker, or similar actor, and can be converted to hard currency by that issuer alone. The bearer can use such a note at full face value only in the town where it was issued (if the bearer doesn't convert it to hard cash with the issuer, any merchant in town can easily do so). Outside of that town, it can be spent at a discount of $(1d+4)\times10\%$. Public notes are issued by a government and so can be spent at face value anywhere within a single kingdom; outside of that kingdom, it can be spent at a discount of $(1d+4)\times10\%$.

• *It's physically vulnerable*. Notes are typically made from paper, cloth, or other materials vulnerable to fire, water, and violence, and must be protected from such hazards until they can be cashed in. A party of delvers who unearth a cache of high-value notes from a foreign kingdom might have to undertake a long, difficult cross-country quest – protecting their precious cargo from swamps and fields of fire – to get their loot to a place where they can cash it in.

COUNTING

With variations in size, condition, and purity, figuring out the precise value of a sack full of coins is harder than it looks. A quick glance into a purse in the aftermath of a fight gives only a general impression of how many and what kinds of coins are present. A full accounting takes more time, unless the looter has the Artifact Lore power-up (*GURPS Dungeon Fantasy 11: Power-Ups*, p. 17).

Sorting coins roughly by size and material takes a minute for a typical purse, or no more than a quiet evening by the fire for as much treasure as a party of adventurers can reasonably carry. Doing so will ascertain the size, exact counts, and face values of *all* coins, and give an approximate idea of their composition. This in turn provides a nominal value for the entire batch.

Learning exact composition can be trickier. Anyone can correctly distinguish copper, silver, and gold, but if alloy coins are present, roll against Merchant, Jeweler, or Alchemy at +2. Failure means misidentifying any billon, electrum, or tumbaga coins as one of their constituent metals (*how* they're misidentified is up to the GM). The counter can also classify coins by the issuing kingdom or other authority, though that may require a roll against Heraldry or even Hidden Lore ("Those triangular ones are all from the Dukes of Earl, and I don't *want* to know who made the ones with the squid on them!").

Determining exact purity isn't difficult but can be timeconsuming. Discovering a coin's precise composition – to within a full percentage point of the major components – calls for a few simple assay tests, if someone is willing to put in the effort. A backpack alchemy lab (*GURPS Dungeon Fantasy 1: Adventurers*, p. 26) has all the necessary equipment and then some. However, reasonably accurate tests require only a scale (e.g., the small balance from *Adventurers*, p. 24 or the steelyard from *Treasure Tables*, p. 26), a piece of suitable stone such as slate (a half-pound slab can be found for free in many places), and vessels of known capacity (such as those in the *Household Items Table*, *Treasure Tables*, p. 14).

Hell Money

A number of religious traditions involve sacrificing representations of valuable goods to ancestors, gods, or other spirits. Among those offerings are banknotes. Some spellcasters may be able to take advantage of such sacrifices.

At the very least, demonologists, necromancers, and shamans can destroy paper money to gain a skill bonus when casting spells. The GM may extend this benefit to clerics as well. Take the total \$ value of notes being sacrificed, divide by 100, and look up the result in the "Linear Measurement" column of the *Size and Speed/Range Table* (p. B550), reading yards for \$. The caster receives the corresponding "Size" modifier as a skill bonus. For example, destroying a \$500 note gives +2, while sacrificing a pile of notes worth \$10,000 grants +10. This adds 10 seconds to the spell's casting time, regardless of the number of notes involved. Assaying requires a Merchant, Jeweler, or Alchemy+4 roll, and takes two minutes *per coin*.

When doing business, most merchants accept coins from known mints at face value unless many of them are in poor condition. See *Debasing Coin* (*Dungeons*, p. 4) for attempts to slip some fakes into the mix or shave off a bit of metal. For currency of an unknown type, traders will likely assay one or two representative coins and assign a value to them all accordingly – if one "gold" coin from the Great Sham Empire turns out to be tumbaga or electrum, the rest are likely to be as well.

BAD PENNIES

Individual coins might be enchanted (see *Magic Coin Tricks*, p. 9), but *entire treasures* may be cursed. Anyone taking even part of a pile of cursed coins can be subject to its malign effects. The *Curses Table* (*Treasure Tables*, pp. 51-52) offers several fitting possibilities; Burden, Bad Luck, Corrupting, Distracting, Haunted, and Voices are particularly good.

Unlike most cursed items, cursed money tends to be *persistent*. Someone afflicted with the curse is liable to continue to suffer from it even after spending the money, or the cursed coins might keep finding their way back to him. Such curses can be lifted by a Remove Curse spell or – if that's unavailable or proves inadequate – by returning the treasure to where it was found. The latter requires that the *entire* treasure be reassembled. Adventurers who realize that a pile of gold was cursed only after spending it will have a lot of currency to track down!

CURRENCY SYSTEMS

When considering systems rather than individual coins in isolation, the copper-silver-gold progression of traditional fantasy currencies is broadly accurate but incomplete. While the order of values of metals is almost always correct, many currencies lacked coins in at least one metal. Currency minted in Western Europe for a large chunk of the Middle Ages was mainly confined to silver coins, with little or no copper or gold; Byzantine coinage was mostly copper and gold; and most Chinese money was copper, with some silver. Other metals were present in each economy, but exchanged as bullion rather than official currency. Moreover, several currency systems had more than one coin of a given metal, much as for many years the United States had a number of different "silver pieces": dimes, quarters, and dollar coins.

Another complicating aspect of historical currencies is that they're almost never decimal. For example, the system of 12 pence to the shilling and 20 shillings to the pound dominated Western European currency from the Roman Empire to the early modern period. Decimalization didn't start until the 18th century, and only concluded with Malta going to decimal currency in 1972. Instead, conversions based on factors of some power of two, with occasional factors of three and 20, tended to predominate; e.g., eight *reales* to the Spanish *peso*, or 16 *annas* to the Indian *rupee*. Even fractional values were used, with the occasional appearance of, say, an odd number of coins of one denomination being equal to *two* of the next denomination up.

To a large extent, this doesn't matter. Different currency systems can provide colorful detail and perhaps even mystical symbolism (e.g., if seven is considered a lucky number, the values of different sizes of coins may be based on multiples of seven), but in the end it's entirely realistic to pay attention only to total weight of precious metal. Indeed, given the severe problems of wear which historical coins encountered, it was standard practice in many cultures to weigh coins, not to count them out and take them at face value. While scholars and other learned adventurers may glean clues about the history of the loot pile they've discovered, everybody else can just toss the money in a bag and have reasonable confidence that they'll get fair value for it in town.

This largely assumes currency made from precious metals. That doesn't have to be the case, but it's difficult to create a practical currency scheme which doesn't depend on such materials. There are many reasons for money to be made from precious metals in the real world:

• With their attractive luster and natural scarcity, such metals are valuable in their own right.

• Though metals are subject to wear from circulation,

they're much more durable than most other valuable substances, such as dyes, medicines, and spices, which easily decay or become contaminated.

• Metal coins can be cut into smaller pieces which retain proportional value, and can be melted down and recombined. This gives them an advantage over gemstones, whose value tends to increase geometrically rather than linearly with size. That is, a two-carat stone is more valuable than two one-carat stones, so breaking it up into more easily circulated bits reduces total value – and once broken, it cannot be put back together.

• Metals can be alloyed, purified, subdivided, and combined to fit the needs of the moment, so their value is relatively constant and easily calculated.

Any realistic currency scheme needs materials which work similarly. For example, if mystical techniques can easily store, combine, and subdivide magical energy – expressed as Fatigue Points rather than as weights of metal – that might from the basis for a currency in a highly magical society.

I found it all: chests of garments and weapons . . . heaps of coins and gems and gold ornaments, and in the midst of all, the jewels of Tothmekri gleaming like frozen starlight!

- Robert E. Howard, "The Black Stranger"

IN THE CHEST YOU FIND

DETAILS, DETAILS

Treasure doesn't just fill the strongbox and pay for drinks. It dazzles the eye with color, sheen, texture, and shape. Here are yet more options for appearance to add to those in *Treasure Tables*.

Motifs

There's a near-infinite range of possible decorative motifs. This table greatly extends and completely replaces the *Decorative Motif Table (Treasure Tables,* p. 55). Roll 1d, 1d, 1d.

Roll	Motif	Notes
Animals		10000
1, 1, 1	Alligator/Crocodile	
1, 1, 1 1, 1, 2	Ant	
1, 1, 2	Ape	
1, 1, 4	Bat	
1, 1, 5	Bear	
1, 1, 6	Bee	
1, 2, 1	Bull	
1, 2, 2	Butterfly	
1, 2, 3	Cat	
1, 2, 4	Cobra Cow	
1, 2, 5 1, 2, 6	Crab	
1, 3, 1	Crane	
1, 3, 2	Deer	
1, 3, 3	Dog	
1, 3, 4	Dolphin	
1, 3, 5	Domestic Fowl	
1, 3, 6	Dove	
1, 4, 1	Dragonfly	
1, 4, 2 1, 4, 3	Eagle Elephant	
1, 4, 5	Elk	
1, 4, 5	Fish	
1, 4, 6	Fly/Gnat	
1, 5, 1	Goat	
1, 5, 2	Hawk	
1, 5, 3	Horse	
1, 5, 4	Leopard Lion	
1, 5, 5 1, 5, 6	Lizard	
1, 6, 1	Locust	
1, 6, 2	Mammoth	
1, 6, 3	Mongoose/Weasel	
1, 6, 4	Mouse/Rat	
1, 6, 5	Owl	
1, 6, 6	Ox	11 • 1)
2, 1, 1 2, 1, 2	Peacock (or other elaborately planet	umea bira)
2, 1, 2 2, 1, 3	Pig Rabbit	
2, 1, 3	Scarab Beetle	
2, 1, 5	Scorpion	
2, 1, 6	Shark	
2, 2, 1	Sheep	
2, 2, 2	Snail	

Roll Motif

Notes

Animals (Continued)

2, 2, 3	Snake
2, 2, 4	Sparrow (or other small bird)
2, 2, 5	Spider
2, 2, 6	Squid/Octopus
2, 3, 1	Swan
2, 3, 2	Tiger
2, 3, 3	Turtle
2, 3, 4	Wasp/Hornet
2, 3, 5	Whale
2, 3, 6	Wolf

Monsters and Unnatural Creatures

2, 4, 1	Animal-Headed Person
2, 4, 2	Demon
2, 4, 3	Dragon
2, 4, 4	Gargoyle
2, 4, 5	Giant
2, 4, 6	Goblin-Kin
2, 5, 1	Griffin
2, 5, 2	Horned/Clawed Human
2, 5, 3	Multi-Animal Hybrid
2, 5, 4	Multi-Headed Animal
2, 5, 5	Phoenix
2, 5, 6	Sea Serpent
2, 6, 1	Undead
2, 6, 2	Unicorn

People

reopie	
2, 6, 3	Baby
2, 6, 4	Barbarian
2, 6, 5	Butcher
2, 6, 6	Carpenter
3, 1, 1	Child
3, 1, 2	Clown
3, 1, 3	Cook
3, 1, 4	Dancer
3, 1, 5	Druid
3, 1, 6	Herdsman
3, 2, 1	Hunter
3, 2, 2	Knight
3, 2, 3	Laborer
3, 2, 4	Magician
3, 2, 5	Mason
3, 2, 6	Monk/Holy Hermit
3, 3, 1	Mounted Archer
3, 3, 2	Musician
3, 3, 3	Peasant
3, 3, 4	Potter
3, 3, 5	Priest
3, 3, 6	Ruler
3, 4, 1	Sage
3, 4, 2	Seamstress/Tailor
3, 4, 3	Smith
3, 4, 4	Warrior

Roll	Motif	Notes
Places		
3, 4, 5	Bedchamber	
3, 4, 6	Castle/Palace	
3, 5, 1	City	
3, 5, 2	Cliffs	
3, 5, 3	Court	
3, 5, 4	Desert	
3, 5, 5	Fields	
3, 5, 6		
	Forest/Jungle Kitchen	
3, 6, 1		
3, 6, 2	Lake/Pond	[1]
3, 6, 3	Map	[1]
3, 6, 4	Meadow	
3, 6, 5	Mountains	
3, 6, 6	Night sky	
4, 1, 1	Ocean	
4, 1, 2	Office/Study/Library	
4, 1, 3	River	
4, 1, 4	Ruins	
4, 1, 5	Tavern/Inn	
4, 1, 6	Temple	
4, 2, 1	Village	
4, 2, 2	Waterfall	
Items and Obj	ects	
4, 2, 3	Anvil	
4, 2, 4	Arm/Hand	
4, 2, 5	Bamboo	
4, 2, 6	Boat	
4, 3, 1	Carnivorous Plant	
4, 3, 2	Carriage	
4, 3, 3	Chariot	
4, 3, 4	Chrysanthemum	
4, 3, 5	Constellation	
4, 3, 6	Eye	
4, 4, 1	Farming Tool (plow, yoke, etc.)	
4, 4, 2	Fir/Pine Tree	
4, 4, 3	Fire	
4, 4, 4	Fruit Tree	
4, 4, 5	Garment	
4, 4, 6	Grain plants	
4, 5, 1	Grape Vines	
4, 5, 2	Hammer	
4, 5, 2	Hand	
4, 5, 4	Head	
4, 5, 5	Helmet	
4, 5, 6	Lotus Morton and Postla	
4, 6, 1	Mortar and Pestle Oak Tree	
4, 6, 2		
4, 6, 3	Rose	
4, 6, 4	Rowed Ship	
4, 6, 5	Sailing Ship	
4, 6, 6	Shell	
5, 1, 1	Shield	
5, 1, 2	Spinning Wheel	
5, 1, 3	Star	
5, 1, 4	Sun	
5, 1, 5	Tentacle	
5, 1, 6	Torture Device	
5, 2, 1	Wagon	

J, Z, Z	war wagon	
5, 2, 3	Weapon	
5, 2, 4	Wheel	
5, 2, 5	Willow Tree	
5, 2, 5	winow free	
Symbols and	Patterns	
v		
5, 2, 6	Alchemical Symbol	
5, 3, 1	Arabesques	
5, 3, 2	Calligraphy	[2]
5, 3, 3	Checkerboard	
5, 3, 4	Concentric Circles	
5, 3, 5	Concentric Squares/Rectangles	
5, 3, 6	Concentric Triangles	
5, 4, 1	Crosshatching	
		[2]
5, 4, 2	Emulation	[3]
5, 4, 3	Floral Pattern	
5, 4, 4	Girih Pattern (Moroccan tile)	
5, 4, 5	Greek Key	
5, 4, 6	Grid, Hexagonal	
5, 5, 1	Grid, Square	
5, 5, 2	Grid, Triangular	
5, 5, 3	Herringbone Pattern	
5, 5, 4	Interlocked Circles	
5, 5, 5	Interlocked Spirals	
5, 5, 6	Interlocked Squares/Rectangles	
5, 6, 1	Interlocked Triangles	
5, 6, 2	Knotwork	
5, 6, 3	Pinstripes	
5, 6, 4	Scale Pattern	
5, 6, 5	Thick Stripes	
5, 6, 6	Vines and Leaves	
6, 1, 1	Zodiacal Signs	
-, -, -		
C		
Scenes		
6, 1, 2	Ball Game	[4]
6, 1, 3	Battle	[4]
6, 1, 4	Birth/Presentation of Child	[4]
6, 1, 5	Building	[4]
6, 1, 6	Communal Meal	[4]
6, 2, 1	Coronation	[4]
6, 2, 2	Dancing	[4]
6, 2, 3	Earthquake	[4]
6, 2, 4	Erotica	[4]
6, 2, 5	Exorcism	[4]
6, 2, 6	Footrace	[4]
6, 3, 1	Funeral	[4]
6, 3, 2	Game-Playing	[4]
6, 3, 3	Gift-Giving	[4]
	•	
6, 3, 4	Harvest	[4]
6, 3, 5	Hunting	[4]
6, 3, 6	Magical Battle	[4]
6, 4, 1	Market	[4]
6, 4, 2	Murder	[4]
6, 4, 3	Musical Performance	[4]
6, 4, 4	Nursing Mother	[4]
6, 4, 5	Party	[4]
6, 4, 6	Peaceful Death	[4]
6, 5, 1	Plowing/Planting	[4]
6, 5, 2	Procession	[4]
0, 3, 2	110003000	[-1]

Roll

5, 2, 2

Motif

War Wagon

Items and Objects (Continued)

Notes

IN THE CHEST YOU FIND

Roll	Motif	
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Scenes (Continued))
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6, 5, 3	Sacrifice	[4]
6, 5, 4	Sailing	[4]
6, 5, 5	Shipwreck	[4]
6, 5, 6	Speech/Sermon	[4]
6, 6, 1	Teaching	[4]
6, 6, 2	Tending Animals	[4]
6, 6, 3	Travel	[4]
6, 6, 4	Wedding	[4]
6, 6, 5	Worship	[4]
6, 6, 6	Wrestling/Boxing	[4]

Notes

Notes

[1] Roll 1d. On a 1, the map is of a location which is imaginary or has been completely destroyed. On a 2-5, it's a reasonably accurate map of a real place. On a 6, it shows the location of something particularly interesting, like a lost treasure, a hidden martial-arts temple, or a gateway to another dimension.

[2] Roll 1d. On a 1, the inscription names its original owner. On a 2-3, it praises or wishes good luck for the owner. On a 4-5, it's an inspirational passage (with "inspiration" in the broadest possible sense; dire warnings, for example, can inspire one to be careful). On a 6, it's a magical incantation.

[3] The object is not just decorated with an image but made to resemble an object or a body part. For example, a wooden chest might be decorated to resemble a tree stump, or a map case might be carved to look like a dragon's limb.

[4] Roll 1d. On a 6, the decoration is a narrative – several connected scenes showing a complete story.

Color

One of the most immediately noticed properties of any object is its color. While many items have a natural color (unpainted wood is more-or-less brown, iron is black or faintly silver-gray, and so on), use this table to determine color at random, where appropriate. Roll 1d, 1d.

Roll	Color*	Roll	Color*
1, 1	Amber	4, 1	Light Green
1, 2	Avocado Green	4, 2	Lime
1, 3	Black	4, 3	Maroon
1,4	Blue	4,4	Olive
1,5	Bronze	4, 5	Orange
1,6	Brown	4,6	Pale Yellow
2, 1	Charcoal	5, 1	Peach
2, 2	Copper	5,2	Pink
2, 3	Crimson	5, 3	Purple
2,4	Dark Brown	5,4	Red
2,5	Forest Green	5,5	Sea Green
2,6	Gold	5,6	Sky Blue
3, 1	Gray	6, 1	Tan
3, 2	Green	6, 2	Turquoise
3, 3	Indigo	6, 3	Vermillion
3, 4	Lapis	6,4	Violet
3, 5	Lavender	6,5	White
3,6	Light Gray	6, 6	Yellow

* The GM may want to rename some of these colors for specific campaigns. Before the development of a broad range of synthetic dyes, many real-world pigments were derived from minerals found in a small region (for example, ultramarine blue, so called by people who had to import it from overseas), plants and animals with a limited range (e.g., Tyrian purple, derived from Eastern Mediterranean mollusks), or manufacturing processes known to only a few (such as Prussian blue and, earlier, Egyptian blue). Adventurers may find items colored orcish green, Nemedian purple, or Tanelorn orange.

Monster Colors

Historically, several pigments were derived from animal sources. The Romans got purple dyes from murex shells, for example, while carmine (a deep red) was derived from an insect found in Central America. Naturally, monsters may be the sources of particularly hard-to-get – and therefore valuable! – dyestuffs. Adventurers can try to extract such things, giving them a more concentrated and stable treasure. Calculate the value of monster parts as usual (*Treasure Tables*, p. 13). A successful Alchemy roll, which takes about a day per 100 lbs. of parts, reduces weight to 5% but doesn't change total value (e.g., 100 lbs. of mon-

ster at \$20/lb. becomes 5 lbs. of dye but is still worth \$2,000) and prevents rotting.



FASTENERS

Clothes and armor are held on by a variety of fasteners. This painfully obvious fact becomes far more interesting when one realizes that these fasteners are vulnerable points for high-precision attacks. Unless otherwise noted, fasteners don't modify the price of a piece of clothing; however, some *do* provide better performance or a more attractive appear-

ance, and therefore increase cost.

Buckles hold together straps with an adjustable metal piece, securing even items put under great strain. This makes them the fastener of choice for more expensive armor. Buckled garments are +1 CF, assuming a combination of cheap materials (wood, base metals). For larger and/or fancier buckles, use the actual cost (*Treasure Tables*, pp. 18-19) *instead* of this CF.

In a low-tech setting, *buttons* as we know them – approximately disk-shaped fasteners fitting through reinforced holes in a garment – are relatively expensive to produce. The buttons themselves aren't too bad; it's the buttonholes that get labor-intensive. Even fairly plain buttons are a luxury item at **Dungeon Fantasy** levels of technology; buttoned garments are +1 CF. This counts toward the value of ornate garments (**Adventurers**, p. 27 and **Treasure Tables**, p. 53).

Laces are long cords (leather or cloth) threaded through a series of holes in a garment, pulled tight, and tied. This is a common fastener, particularly on tougher materials like heavy cloth, leather, and many kinds of armor. Laces can be decorative, with colored ribbons contrasting with the clothing they're fastening. [Athena] guided it to the part where the golden buckles of the belt that passed over his double cuirass were fastened, so the arrow struck the belt that went tightly round him.

– Homer, Iliad, Book IV

Garments without fasteners may be held together by *pins*. The pins used to fasten clothing often have a design resembling that of a modern safety pin – a loop which allows the point of the pin to be secured by a catch – though there are other varieties similarly capable of securing cloth (e.g., Celtic penannular brooches). Pinned garments are -0.2 CF but require the separate purchase of pins to wear (treat these as buckles; see *Treasure Tables,* pp. 18-19). Because the method of fastening them requires that they be repeatedly penetrated, pinned garments aren't well-suited to armor enchantments.

Toggles are rods or balls typically made from wood, bone, or knotted fiber. The toggle, attached to a garment by a very short cord, is slipped through a separate loop of cord. The result resembles nothing so much as buttons and external buttonholes applied after the fact.

Roll 1d to determine what holds on any garment. Ignore results of "none" and "pins" for flexible armor. Pieces of rigid armor are fastened by laces on 1-3, buckles on 4-6.

Roll	Fastener	To Hit	DR*/HP
1	None	-	-
2	Buckles	-8	1/2
3	Buttons	-13	0/1
4	Laces	-5 to -9	0/2
5	Pins	-4 to -7	0/2
6	Toggles	-10	0/1

* Magical DR on a garment (e.g., the Fortify enchantment) protects fasteners as well.

Attacking Fasteners

For high-skill heroes who don't want to or cannot inflict a lot of damage, attacking fasteners – like striking at weapons – can be a useful way of discomfiting opponents.

Most fasteners can be attacked with a cutting or impaling weapon, but laces require a cutting weapon. Cloaks and footwear typically have one fastener. Buttoned and toggled garments usually have four to six, while pinned garments have two or three. A typical laced garment has one fastener, though shirts, jackets, and the like may have detachable sleeves also held on by laces. Items of armor have 1d/2 times as many fasteners as other garments – and unlike regular clothing, which has fasteners in front for ease of access, these are on the back or sides, making them difficult or impossible to target in combat. Roll 1d: 1-2 means the fasteners are in back, 3-4 means one side, and 5-6 means half on either side.

If all of a garment's fasteners have been destroyed, it's loose and in danger of falling off. Loose torso armor gives the wearer a general -1 to DX, while loose armor on limbs or extremities inflict -1 to DX for any action involving the affected body parts (e.g., anything involving the hand inside a loose gauntlet or the foot wearing a loose shoe). A loose helmet covering only the skull falls off if the wearer dodges, moves faster than Move 3, or performs any other rapid or violent action. Under those conditions, a loose helmet covering the entire head will turn and cover the eyes, rendering the wearer effectively blind! Furthermore, an attacker may attempt to yank off any loose garment; see *Grabbing*, p. B370.

FABRICS

Though it seems commonplace to us, textile manufacturing was historically a key industry. Elaborate terminologies arose to describe classes of fabrics, detailing how they were made and from what, and buyers would always know their taffeta from their organdy.

Use the table below to determine what material a random garment is made from (the table under *Color*, p. 15, is useful for rounding out the item's description). More elaborate fabrics increase value as indicated by the CF. This is far from an exhaustive historical list, but it hits many physical and technological differences. Roll 1d, 1d.

1, 1-3 – Plain Weave. +0 CF.

The simplest and most common weave, where *weft* threads (threads woven back and forth horizontally into a set of parallel threads held in place) alternate going over and under *warp* threads (threads held by the loom, running perpendicular to the weft) one at a time.

1, 4-6 – Basket Weave. +0.1 CF.

Instead of a plain weave, both warp and weft threads are grouped in sets of two or more (e.g., two warp threads going over two weft threads), giving a checkerboard-like appearance.

2, 1-3 - Twill. +0.1 CF.

Instead of a plain weave, weft threads go over and under in larger groups, giving the fabric a textured appearance with diagonal ribs.

2, 4-6 – Cambric. +0.1 CF.

A dense plain weave, typically made from linen.

3, 1-3 – Canvas. +0.1 CF.

A heavy cloth suitable for sail-making, produced from hemp or similarly durable fiber. Canvas garments protect covered skin from small biting insects (mosquitoes and gnats – not giant praying mantises!), but they don't breathe well: -1 to heat-related HT rolls.

3, 4-6 – Gauze. +0.3 CF.

An exceptionally loosely woven, lightweight fabric. Gauze is often silk, but other fibers can be used.

4, 1-2 – Grogram. +0.5 CF.

A fabric made from silk and a coarser fiber such as wool, sometimes stiffened with gum. Grogram is most often used for durable coats and cloaks. It has the same effects on insect bites and heat-related HT rolls as canvas (**3**, **1**-**3**).

4, 3 – Crinoline. +0.1 CF.

A stiff fabric blending composed of horse hair and lighter fibers such as cotton or linen.

4, 4 – Taffeta. +*4 CF*.

A tightly woven silk plain weave.

4, 5 – Chiffon. +0.5 CF.

A lightweight fabric using very tightly twisted thread. Tensions in the thread give the fabric a bit of texture.

4, 6 – Double Weave. +15 CF.

A complex fabric made with two or more layers of warp threads. Weft threads may go over and under the warp threads on one side or both, resulting in exceptionally elaborate designs like a damask, but without these appearing in negative on the back. The two sides could in fact have entirely different designs – and there could be a hidden pattern *inside*. A reversible double-weave garment may have camouflage (*GURPS*)

Fabric Out of Space

Ordinary fabrics, though flat, are woven in three dimensions. Mad weavers in thrall to Elder Things sometimes work in *four*, warp and weft reaching into Places Man Was Not Meant To Know. Four-dimensional cloth has a vaguely disturbing appearance, sometimes twitching as though it were alive and shifting into unrecognizable colors, but can be useful to psis. For example, a skullcap made from it acts as a pyramid hat (*GURPS Dungeon Fantasy 14: Psis,* p. 27) except that it provides no DR, allows other headgear to be worn over it, and if worn for more than an hour a day causes the wearer to suffer from the Nightmares disadvantage that night.

Dungeon Fantasy 13: Loadouts, p. 25) on one or both sides for half the usual CF.

5, 1 – Organdy. +0 CF.

A sheer cotton fabric, sometimes starched for stiffness.

5, 2 – Organza. +2.5 *CF*.

An organdy made with silk.

5, 3 – Satin. +14 CF.

A particularly fine silk fabric woven with weft threads substantially on one side of the warp threads (e.g., a weft thread goes over five warp threads, under one, and back over another set of five), giving it a smooth, shiny front surface and a relatively rough, dull back.

5, 4 – Sateen. +10 CF.

Fabric woven like satin, but using wool, cotton, or a similar thread, or a blend of silk and lesser fibers.

5, 5 – Brocade. +16 CF.

A satin with multicolored threads.

5, 6 – Damask. +20 CF.

A satin with raised figures in the weaving pattern. These figures can be seen in negative on the back side of the fabric.

6, 1 - Lamé. +22 CF.

A brocade which includes metallic threads, which are themselves usually normal fiber threads wrapped with metal foil.

6, 2 – Jamdani. +4 CF.

A loosely woven cotton fabric with damask-style figurative designs woven into it.

6, 3 – Velvet. +0.5 CF.

A fabric woven with a pile (weft threads pulled into short loops rising from the surface, which are then cut), giving it a plush, thick feel.

6, 4 – Corduroy. +0.75 CF.

Related to velvet, a fabric with a pile arranged into parallel ribs.

6, 5 – Double-Velvet. +8 CF.

A velvet with piles of different lengths, creating a raised figurative pattern.

6, 6 – Samite. +5 *CF*. A silk twill.

Implausible Materials

Treasure Tables introduced the idea of items supernaturally crafted from substances which could not otherwise make up such an article: condensed moonbeams, congealed screams, and so on. Such objects have essentially the same properties as mundane items of their type; e.g., a cloak of stone is still flexible, if a bit rough, while a sword of quicksilver is still solid and sharp. Implausible materials don't automatically give things made from them significant magical effects – like the ability to cast spells, or blanket bonuses to DR or damage – but frequently have incidental features. Notably, they're often suitable for triggering Dread, Revulsion, or Weakness in susceptible individuals, and weapons made of them may be able to exploit a target's Vulnerability. See the notes on specific materials for other special qualities.

Some implausible materials have vulnerabilities of their own. In particular, while most are nonconductive and nonflammable, there are exceptions. Articles made of conductive substances (as a practical matter, that means conductive armor) provide no protection against lightning and similar attacks. Those made of flammable materials are vulnerable to heat and flame as though they were wood if rigid or fabric if flexible. To select an implausible material, roll 1d, 1d.

1, 1 – Basalt. +2 CF.

A rough-faced gray stone, often in a pattern of hexagonal cells. Basalt items are very hard, and get +1 to rolls to resist breakage.

1, 2 – Blood. +3 CF.

Deep red, verging on black in places, with a faint-butdistinct coppery smell. Gives +1 to scent-based Tracking rolls to follow the owner, and -2 to reactions from just about everybody. Conductive.

1, 3-4 – Bone. +1 CF.

White, or possibly slightly off-white, and somewhat porous. People using bone items suffer -1 to reactions from everyone but necromancers.

1, 5-6 – Cloud/Mist. +5 CF.

The item is a soft, swirling, mottled gray, and marginally translucent; very strong light sources are just barely visible through it, at least around the edges. It always feels slightly damp. Garments and armor made out of this material count as "wet clothes" for exposure to cold (p. B430), but give +1 to heat-based HT rolls. Partial insubstantiality reduces item weight by 10%. Conductive.

2, 1 – Darkness. +*2 CF*.

The item is pure black, reflecting no light whatsoever. Fine surface features like engraving are almost impossible to see if the object is kept clean.

2, 2 – Ebony. +2 CF.

A fine-grained, dark brown or black wood. Flammable.

2, 3 – Flame. +4 CF.

Hot to the touch (though not so much so as to be damaging), the item sheds light as a torch. A garment or armor made from flame gives +2 to cold-based HT rolls, -2 to heatbased ones.

2, 4 – Flower Petals. +*2 CF*.

In addition to being colorful and sweet-smelling, the object is slightly soft and velvety to the touch. The distinct aroma gives +1 to attempts to track the owner by scent, but someone with prominently displayed flower-petal items gets +1 to reactions in addition to any bonuses granted by ornate equipment. Flammable.

2, 5 – Horn. +1 CF.

Smooth, if slightly porous, with colors ranging from ivory to a medium brown.

2, 6 – Ice. +4 CF.

White or faintly blue, and cold to the touch (don't lick the item!). A garment or armor made from ice gives -2 to cold-based HT rolls, +2 to heat-based ones. Conductive.

3, 1-2 – Insects. +1 CF.

Made from clusters of interlocked insect exoskeletons, chitin items range from a dull gray-green to a rainbow sheen like an oil slick on water, which is attractive but very creepy (-2 to reactions from most people).

Some items are made from *stinging* insects. Weapons made from such creatures cause an additional -1 in shock penalties when they inflict injury but do no extra damage.

3, 3-4 – Leaves. +1 CF.

The object is made from overlapping layers of greenery. Some items may turn colors with the seasons. Items made from leaves are Flammable (p. B433) when brown but Highly Resistant when green.

3, 5 – Lightning. +*4 CF*.

Silvery, but with shuddering edges, a faint crackling noise, and a slight scent of ozone. Lightning items cast a flickering glow equivalent to candlelight. However, the jarring flashes make them uncomfortable to use: -1 to long-term tasks such as reading or working with machinery while using such an object as a light source. Conductive.

3, 6 – Marble. +3 CF.

Mottled stone – often white or in earth tones, but sometimes with a pink or blue tint – with a smooth polish. Marble items are particularly vulnerable to acids; where applicable, halve DR against such attacks.

4, 1 – Moonbeams. +*3 CF*.

Through the course of a month, the item goes from being a pale, glowing gray (about the light of a candle) to near-black and back again.

4, 2 – Night. +*2 CF*.

As with darkness (**2**, **1**), but a slowly shifting array of stars makes surface features a bit easier to make out.

4, 3 – Quicksilver. +16 CF.

The item is mirror-smooth and silvery, but ripples faintly when disturbed. Conductive.

4, 4 – Sandstone. +*2 CF.*

Rough-surfaced, with earth-tone colors ranging from white to a deep brick red. Larger items have multiple strata of colors.

4, 5 – Screams. +1 CF.

Translucent, if slightly cloudy. The item always seems to be vibrating slightly, and can be heard if one puts an ear very close to it.

4, 6 – Sea Foam. +*3 CF.*

Translucent, milky pale green or turquoise, with roiling whitish areas. The item smells faintly of the sea and has a salty taste. Like clouds and mist, garments and armor made out of this material count as "wet clothes" for exposure to cold (p. B430), but give +1 to heat-based HT rolls. Conductive.

5, 1 – Shell, Coarse. -0.1 CF.

Very rough, dull-colored seashell resembling the outside of a clam or an oyster. Such items have a faint odor of the sea, making them slightly easier to track (+1 to scent-based Tracking rolls) away from coastal areas.

5, 2-3 – Shell, Fine. +4 CF.

A smooth, mother-of-pearl surface, with rainbow colors on a white or slightly silvery ground.

5, 4 – Sky. +1 CF.

Usually a medium blue, but growing lighter or darker from time to time, sometimes becoming an overcast gray. A few examples change to match their owner's mood: clear and blue in happy times, dark and cloudy with unhappier moments. While impressive, this makes the owner's moods easy enough to spot that others get +1 to any social skill used against him. He roved the hall, fastidiously selecting those objects of small bulk and great value: a small pot with antlers which emitted clouds of remarkable gasses when the prongs were tweaked; an ivory horn through which sounded voices of the past; a small stage where costumed imps stood ready to perform comic antics; an object like a cluster of crystal grapes, each affording a blurred view into one of the demon worlds; a baton sprouting sweetmeats of assorted flavor; an ancient ring engraved with runes; a black stone surrounded by nine zones of impalpable color.

> – Jack Vance, *The Eyes of the Overworld*

5, 5 – Smoke. +1.5 CF.

Resembles clouds, but a bit darker. The item also has a distinct scent of burning and leaves dark smudges on things it touches.

5, 6 – Sunlight. +5 *CF*.

The item shines with a bright, golden light equivalent to a torch. It is pleasantly warm to the touch.

6, 1 – Tears. +1 CF.

Like water, the item is fairly transparent. It is also warm to the touch – and, if one tastes it, salty. Conductive.

6, 2 – Teeth. +1 CF.

Appears similar to bone and horn, though usually with a glossier surface and a pointed end.

6, 3-4 – Thorns. -0.1 CF.

The item is made from a thick tangle of thorny branches and vines. It feels prickly, though this causes no special damage. Flammable.

6, 5-6 – Water. +1 CF.

Transparent and somewhat reflective, a close observer can see ripples through the item if it is struck. Garments and armor made out of this material count as "wet clothes" for exposure to cold (p. B430), but give +1 to heat-based HT rolls.

Advanced Social Studies

Archaeologists identify defunct cultures not by language, religion, and ideology, as is typical for living cultures, but by the styles and techniques of their artifacts. Indeed, some realworld societies, such as Europe's Bell-Beaker folk, are named for distinctive items of material culture. Dungeon delvers – who also go underground in search of relics – are likely to make similar identifications. As noted on p. 58 of *Treasure Tables*, items can be valuable not just because of their damage potential, magical power, or precious metal content, but also because of their association with various societies. *Treasure Tables* offers some general suggestions for putting together certain kinds of societal styles of artifacts. This is a more systematic guide.

MAKING HISTORY

A number of factors might make a given society's artifacts distinctive (though not all of them will be). When making up a societal style, the GM should consider these aspects.

Decorative motifs. Pick two to four distinctive decorative motifs (*Motifs*, pp. 13-15). For example, a society might use an elephant as a common symbol and make frequent use of triangular grids. While items produced by the society in question can certainly use other motifs, most of their artifacts will display at least one of their preferred themes.

Decorative embellishments. Pick one or two embellishment techniques (*Treasure Tables,* pp. 53-55). For example, a society may be particularly partial to decorative fringes and branded designs.

Materials. A society may have preferred materials. This might have significant effects (like all blades being made from bronze or tempered glass), but the choice may simply be cosmetic (for example, all woolen textiles, or wooden items made from zebrawood).

Favored arms and armor. Many societies have favored fighting styles, leading to specific weapon and armor preferences. These in turn influence the martial hardware found by adventurers: bows and light spears for horse-riding nomads, fencing weapons for decadent sophisticates, axes for forest-dwelling barbarians, and so on.

Favored other items. Every society has particular distinctive items. Delvers may start to think of treasures as left behind by the "poison dagger people" or "the orichalcum ewer makers." If a society favors fans, hair combs, or decorative gorgets, particularly ornate versions may frequently be found as treasure.

Notable supernatural capabilities. A given society may prefer wizardly magic, divine magic, or psi, and its supernatural artifacts will reflect that. The whole list of supernatural origins on p. 50 of *Treasure Tables* can be in play. For example, one society may have been master alchemists, while another might have relied on druids for its supernatural effects. *Predominant race.* A society may be made up predominantly of a given race. This has implications for the SM of items and other issues of fit.

Ethnic cool. In *Dungeon Fantasy*, every society should have at least one special and distinctive piece of equipment. This might simply mean that the society is a prodigious producer of exceptional items (fine or very fine blades, fireball wands with favorable recharging conditions, etc.), but its goods may have unique properties as well. Elven mail and dwarven weapons, for example, are essentially ethnic cool items.

Base CF and reactions. Association with famous societies can give artifacts additional value above and beyond that granted by intrinsic characteristics such as decorative embellishments, enchantments, and quality, providing a CF. However, objects might *also* carry a society's reputation with them, making the bearer more or less acceptable to those he meets. A reaction modifier attached to a culture's treasures may apply to everyone, a particular group, or just a specific audience of potential buyers. This is a nice way for the GM to establish who the major players in history and the current world are. For example, the Dread Zombie Empire might be known for powerful magic and high-quality items, giving goods it produces +2 CF, but the unsavory connotations of their origins may mean that anyone using such artifacts gets -1 to reactions from everybody except necromancers and the undead.

SAMPLE CULTURES

Here are a few examples of what a society's material culture might look like.

North Steppe Orcish Hordes

The near-desert plains of the middle-north are a fertile breeding ground for barbaric armies: too dry and cold to support cities, but not too desolate to sustain roving hordes.

ETHNIC COOL GEAR

Here are some notable items uniquely produced by the sample cultures (above).

Orcish Sawtooth Blades: These wickedly jagged weapons are, in fact, a bit more lethal than usual. Increase *injury* from cutting weapons (*after* considering DR and wounding modifier) by 1 HP. +1 CF.

Doublehard Glass: The Translucent City produced a particularly hard, sharp version of tempered glass (*Treasure Tables*, p. 33). Doublehard glass gets the same damage bonus as tempered glass *and* adds armor divisor (2) to impaling attacks. +59 CF.

Yellow Mountain Helmet Level: An arrangement of liquid-filled glass vials in a metal housing – small enough to affix to the inside of a helmet visor (as well as the back of a gauntlet, side of an axe blade, or any other surface of at least three or four square inches) – allows determination of the vertical angle between the user and any observable point with a simple IQ roll. This may be treated as a complementary skill roll for Cartography and Navigation; it also aids uses of Architecture and Engineer where knowing elevations is important. Widespread use of the device has led to a myth that dwarves have an inherent ability to measure slopes. \$80, 0.1 lb.

The orcs of the region use a curved fang as their most common motif, symbolizing the bite of their teeth into enemies, both individually and as an aspirational symbol of conquest; this is often on a ground of nested squares. Most decorated items use relief carving or engraving – durable techniques which resist wear better than surface treatments like painting – and crude embroidery for flexible items. These orcs lean toward leather and dragonhide armors, frequently with a facing layer of the skin of sentient enemies, and favor jagged-edged axes and poisonwood spears as weapons. North steppe weapons are perfectly functional, but look cheap and flimsy: -2 to reactions from potential buyers.

The Translucent City

This long-lost city was home to a wide range of what might be called "fair folk," predominantly elves (of every variety) and pixies, with a smattering of fauns, nymphs, and the like. The city's real name is lost to the years; its current appellation comes from the vast quantities of transparent and translucent items it produced. It was a prodigious producer of tempered glass items (notably fencing weapons and broad arrowheads) in a variety of colors, as well as an enthusiastic user of glass beads for decoration, often punctuated with precious stones. Garments were typically made from lightweight fabrics such as gauze and jamdani, adorned with ribbons and colored fringes. The city's natives were fond of all manner of writing, and used flowing, arabesque decorative motifs. They also made frequent use of trees (the object of the predominant local religion) and unicorns (the symbol of the civic government).

While the city produced a great many magical items, its demise in the aftermath of a magical war left the majority of these cursed. The city's elegant designs remain admired long after its destruction (+4 CF), but wizards and other potential magical buyers don't trust artifacts that originated there (-2 to reactions).

Yellow Mountain Kingdom

Before the underground realm collapsed in a magical cataclysm, the Yellow Mountains were home to an extensive dwarven kingdom. Yellow Mountain smiths worked heavily in bronze, orichalcum, and gold, largely avoiding iron, but were also known for multicolored inlay. Yellow Mountain work is often recognized by spiral patterns and a fondness for narrative; anything big enough to feature such decoration is likely to have a story beginning at the center of a spiral and proceeding outward from there. Weapons are usually short-ranged: axes and swords to the near-total exclusion of polearms, spears, and missile weapons. Magical capabilities run heavily toward the defensive: buffs, resistances, Defending Weapon, and the full range of armor enchantments. The Yellow Mountains also produced tools prized even among other dwarves. Yellow Mountain items get +1 CF, and someone using Yellow Mountain tools receives +1 to reactions from artificers and other craftsmen, as well as dwarves.

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It's the root of all evil Of strife and upheaval But I'm certain, honey, that life would be sunny With plenty of money and you – Al Dubin, "With Plenty of Money and You"

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