

Note: Orange is house rules.

Mining p.106 DMG

Type of Rock	Type of Rock			Race	Maximum Number per 10' Wide Shaft
	very soft	soft	hard		
gnoll, halfling, human	75	50	25	dwarf, gnome, halfling, kobold	16
gnome, kobold	80	60	30	hobgoblin, human, orc	12
goblin, orc	85	65	30	gnoll	8
dwarf, hobgoblin	90	70	35	ogre	6
ogre	150	100	50	Giant, any type	4
hill giant	250	150	75		
fire giant, frost giant	300	200	100		
stone giant	500	350	175		

note: cubic feet mined per 8 hour shift per miner

Max Mined Per Shift per 10' Wide Tunnel							Max Mined Per 3 Shifts per 10' Wide Tunnel										
Very Soft	Soft	Hard	Very Soft	Soft	Hard	Length Standard Tunnel	Very Soft	Soft	Hard	Very Soft	Soft	Hard	Length Standard Tunnel	Very Soft	Soft	Hard	
			Length Standard Tunnel	Length Standard Tunnel	Length Standard Tunnel					Length Standard Tunnel	Length Standard Tunnel						
Dwarf	1,440.00	1,120.00	560.00	9.20	7.15	3.58	Dwarf	4,320	3,360	1,680	28	21	11	Dwarf	4,320	3,360	1,680
Gnome	1,280.00	960.00	480.00	8.18	6.13	3.07	Gnome	3,840	2,880	1,440	25	18	9	Gnome	3,840	2,880	1,440
Halfling	1,200.00	800.00	400.00	7.67	5.11	2.56	Halfling	3,600	2,400	1,200	23	15	8	Halfling	3,600	2,400	1,200
Kobold	1,280.00	960.00	480.00	8.18	6.13	3.07	Kobold	3,840	2,880	1,440	25	18	9	Kobold	3,840	2,880	1,440
Hobgoblin	1,080.00	840.00	420.00	6.90	5.37	2.68	Hobgoblin	3,240	2,520	1,260	21	16	8	Hobgoblin	3,240	2,520	1,260
Human	900.00	600.00	300.00	5.75	3.83	1.92	Human	2,700	1,800	900	17	11	6	Human	2,700	1,800	900
Orc	1,020.00	780.00	360.00	6.52	4.98	2.30	Orc	3,060	2,340	1,080	20	15	7	Orc	3,060	2,340	1,080
Gnoll	600.00	400.00	200.00	3.83	2.56	1.28	Gnoll	1,800	1,200	600	11	8	4	Gnoll	1,800	1,200	600
ogre	900.00	600.00	300.00	5.75	3.83	1.92	ogre	2,700	1,800	900	17	11	6	ogre	2,700	1,800	900
hill giant	1,000.00	600.00	300.00	6.39	3.83	1.92	hill giant	3,000	1,800	900	19	11	6	hill giant	3,000	1,800	900
fire giant, frost giant	1,200.00	800.00	400.00	7.67	5.11	2.56	fire giant, frost giant	3,600	2,400	1,200	23	15	8	fire giant, frost giant	3,600	2,400	1,200
stone giant	2,000.00	1,400.00	700.00	12.78	8.94	4.47	stone giant	6,000	4,200	2,100	38	27	13	stone giant	6,000	4,200	2,100

Cross Sectional Area Standard Tunnel

157 sf
Standard Tunnel is 10' wide, 16' tall arched roof.

Type of Rock being Mined	Chance of Natural Space per shift 10' wide shaft
Limestone (v. soft)	1 in 10
Other Sedimentary Rock (soft)	1 in 50
Lava (hard)	1 in 20
Other Igneous Rock (hard)	1 in 100

If natural space found roll on Table VIII p.172 DMG
For Hard Rock roll on VIII.A Pools p172 for each natural space
For soft or very soft roll on both VIII.A & VIII.B Lakes

If a natural Space has a monster use the monster table p. 174 for its level.
If a found monster is a naturally tunneling monster (e.g. goblins), then use Appendix A to determine tunnels from the cavern.
If there is a lake with a monster use the shallow freshwater table p.179.

Max Mined Per Month 3 Shifts/Day per 10' Wide Tunnel						
Very Soft	Soft	Hard	Very Soft	Soft	Hard	Length Standard Tunnel
			Length Standard Tunnel	Length Standard Tunnel	Length Standard Tunnel	
Dwarf	129,600	100,800	50,400	828	644	322
Gnome	115,200	86,400	43,200	736	552	276
Halfling	108,000	72,000	36,000	690	460	230
Kobold	115,200	86,400	43,200	736	552	276
Hobgoblin	97,200	75,600	37,800	621	483	241
Human	81,000	54,000	27,000	517	345	172
Orc	91,800	70,200	32,400	586	448	207
Gnoll	54,000	36,000	18,000	345	230	115
ogre	81,000	54,000	27,000	517	345	172
hill giant	90,000	54,000	27,000	575	345	172
fire giant, frost giant	108,000	72,000	36,000	690	460	230
stone giant	180,000	126,000	63,000	1,150	805	402

Level:
Wherever mining starts is level 1.
For every 30' mined downwards or upwards roll on Table VI p. 172 DMG using a d6.

For Mined Valuables

Amount of Rock (cubic Feet)	Treasure	
	Type	Notes
100,000	A	Chance of Magic Reduced to 5%.
200,000	B	Chance of Magic Reduced to 5%.
260,000	C	Chance of Magic Reduced to 5%.

Treasure type is p. 105 MM.
Volume of Natural Spaces do not count toward volumes. Use Appendix A for treasure in these areas.
For lesser amounts mined prorate by portion of volume mined.

- Prospecting**
- Dwarf Villages are always on a mine.
 - 50 percent of Gnome villages are on a mine.
 - If an humanoid lives underground, 10 percent chance of a mine.
 - Humans do not live on mines.
 - Only Humans, Dwarves, and Gnomes may prospect.
 - To prospect a human must have the miner secondary skill (see p.12 DMG).
 - A prospector may explore one 1-mile hex per day.
 - For each hex explored, roll a d100, a 1 finds a minable deposit.
 - The cubic feet of deposit is a d10 raised to the power of a d8 in cubic feet.
 - Dwarf prospecting found deposits is cubic feet of d10 raised to the power of a d8+2 in cubic feet.

Road Building					Road Building By mile				
Feet of road per standard 10' wide, 1 standard work crew/shift					Days to complete 1 mile of road per 1 standard work crew/shift.				
	Mountains	Hills	Plains	Forest		Mountains	Hills	Plains	Forest
Dwarf	48	96	3,703	1,851	Dwarf	110	55	1	3
Gnome	41	82	3,291	1,646	Gnome	128	64	2	3
Halfling	34	69	3,086	1,543	Halfling	154	77	2	3
Kobold	41	82	3,291	1,646	Kobold	128	64	2	3
Hobgoblin	36	72	2,777	1,389	Hobgoblin	147	73	2	4
Human	26	51	2,314	1,157	Human	205	103	2	5
Orc	31	67	2,623	1,311	Orc	171	79	2	4
Gnoll	17	34	1,543	771	Gnoll	308	154	3	7
ogre	26	51	2,314	1,157	ogre	205	103	2	5
hill giant	26	51	2,571	1,286	hill giant	205	103	2	4
frost giant	34	69	3,086	1,543	fire giant, frost giant	154	77	2	3
stone giant	60	120	5,143	2,571	stone giant	88	44	1	2

10' wide unpaved road
Flagged roads divide distance by three.
Note these assume crew size of standard shaft.
Note: no more than 10 crews may work on a specific road at once.
For bodies of water pick analogous structures from p.107 to estimate time and cost to build.