

Section I – Percentages

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1. What is 8% of 222.5?
2. What is 8% of 28.75?
3. 41 is 64% of what number?
4. 53 is 96% of what number?
5. 53 is what percent of 212?
6. 37 is what percent of 740?
7. What is 64% of 290.625?
8. 23 is 72% of what number?

Section II – Blueprint Calculations

9. Shape B, Scale = 8, panel job.

13. Shape J, Scale = 15, caulking job.

10. Shape A, Scale = 8, brick job.

14. Shape M, Scale = 24, caulking job.

11. Shape A, Scale = 24, wire job.

15. Shape R, Scale = 30, tile job.

12. Shape J, Scale = 30, caulking job.

16. Shape Q, Scale = 32, molding job.

Section III – Carbon Footprint

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17. How many pounds of CO₂ are released by burning 155 pounds of Balsam Fir?
- 21 Room C's Floor, made of Timber, red beech, if inside is 83°F and outside is 20°F?
18. How many pounds of CO₂ are released by burning 176 pounds of Paper Birch?
- 22 Room B's Wall #2, made of Cork, re-granulated, if inside is 80°F and outside is 86°F?
19. How many mmBTUs are generated by burning 440 pounds of Boxelder?
- 23 Room A's Floor, made of Concrete, stone, if inside is 80°F and outside is 40°F?
20. How many mmBTUs are generated by burning 97 pounds of Black Ash?
- 24 How many pounds of CO₂ are released by burning butane for 4 months in a EG-40?

Section IV – Green Building

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25. How many mmBTUs are generated by running a ET 110-H for 9 hours?
26. How many mmBTUs are generated by burning 262 pounds of Beech?
27. How many pounds of CO₂ are released by burning Bituminous coal for 5 weeks in a GV90+6?
28. Room B's Ceiling, made of Polyurethane foam, if inside is 56°F and outside is 13°F?
29. How many mmBTUs are generated by burning 115 pounds of Aspen?
30. Room B's TSA, made of Wood across the grain, white pine, if inside is 64°F and outside is 32°F?
31. How many pounds of CO₂ are released by burning 375 pounds of East.Hophornbeam?
32. Dodecane cycle, 1148 (lb/hr) flowrate, outside is 80°F, inside 88°F?