

## Section I – Percentages

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1. What is 72% of 42.5?
2. 59 is what percent of 92.1875?
3. 93 is 15% of what number?
4. 83 is 8% of what number?
5. What is 96% of 23.75?
6. What is 32% of 155?
7. 67 is what percent of 167.5?
8. What is 36% of 1675?

## Section II – Blueprint Calculations

9. Shape B, Scale = 32, caulking job.      13. Shape I, Scale = 8, panel job.

10. Shape E, Scale = 36, baseboard job.      14. Shape M, Scale = 48, carpet job.

11. Shape D, Scale = 35, wire job.      15. Shape M, Scale = 48, caulking job.

12. Shape I, Scale = 24, brick job.      16. Shape Q, Scale = 36, panel job.

## Section III – Carbon Footprint

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17. Ammonia, 104oF cycle, 1390 (lb/hr) flowrate, outside is 66°F, inside 68°F?
- 21 Room B's Wall #1, made of Hardwoods (oak, maple..), if inside is 55°F and outside is 74°F?
18. How many mMBTUs are generated by burning 268 pounds of Sugar Maple?
- 22 How many pounds of CO2 are released by burning kerosene for 3 weeks in a ET 150-H?
19. Room C's Wall #2, made of Polyethylene low density, PEL, if inside is 81°F and outside is 32°F?
- 23 Hexane cycle, 1446 (lb/hr) flowrate, outside is 79°F, inside 47°F?
20. How many mMBTUs are generated by burning 331 pounds of Hackberry?
- 24 Decane cycle, 1223 (lb/hr) flowrate, outside is 76°F, inside 41°F?

## Section IV – Green Building

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25. Alcohol, ethyl 104oF (ethanol) cycle, 878 (lb/hr) flowrate, outside is 75°F, inside 88°F?      29 Ether cycle, 755 (lb/hr) flowrate, outside is 52°F, inside 65°F?
26. How many pounds of CO<sub>2</sub> are released by burning Anthracite coal for 9 days in a ULT 80?      30 Dodecane cycle, 1160 (lb/hr) flowrate, outside is 87°F, inside 84°F?
27. How many pounds of CO<sub>2</sub> are released by burning 88 pounds of Boxelder?      31 How many pounds of CO<sub>2</sub> are released by burning 388 pounds of Paper Birch?
28. Room A's Floor, made of Glass, Pearls, saturated, if inside is 73°F and outside is 93°F?      32 How many mmBTUs are generated by burning 362 pounds of Jack Pine?