

## Section I – Percentages

**221**

---

1. 71 is what percent of 284?
2. 43 is 36% of what number?
3. 83 is 24% of what number?
4. 51 is 24% of what number?
5. 73 is what percent of 114.0625?
6. 91 is what percent of 284.375?
7. 93 is what percent of 1860?
8. What is 72% of 58.75?

## Section II – Blueprint Calculations

9. Shape D, Scale = 50, pipe job.

13. Shape I, Scale = 30, paint job.

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

14. Shape L, Scale = 30, baseboard job.

11. Shape D, Scale = 36, caulking job.

15. Shape K, Scale = 15, molding job.

12. Shape I, Scale = 30, molding job.

16. Shape P, Scale = 8, carpet job.

## Section III – Carbon Footprint

## 221

- 
17. How many pounds of CO<sub>2</sub> are released by burning 58 pounds of Black Ash?
- 21 Room A's TSA, made of Straw slab insulation, compressed, if inside is 74°F and outside is 42°F?
18. How many mmBTUs are generated by running a EG-45 for 7 days?
- 22 How many mmBTUs are generated by running a ET 150-C for 9 days?
19. How many mmBTUs are generated by burning 194 pounds of East.Hophornbeam?
- 23 Hexane cycle, 990 (lb/hr) flowrate, outside is 57°F, inside 79°F?
20. Sodium hydrate cycle, 682 (lb/hr) flowrate, outside is 76°F, inside 83°F?
- 24 Room C's Wall #1, made of Plaster, sand, if inside is 85°F and outside is 10°F?

## Section IV – Green Building

221

---

25. How many mmBTUs are generated by running a CGi-5 for 10 days?
26. Room B's 4 Walls, made of Rubber, cellular, if inside is 84°F and outside is 89°F?
27. Room C's Wall #1, made of Hastelloy C, if inside is 85°F and outside is 90°F?
28. How many mmBTUs are generated by running a CGa-6 for 6 days?
29. How many mmBTUs are generated by burning 191 pounds of Yellow Birch?
30. How many pounds of CO<sub>2</sub> are released by burning 145 pounds of Red Maple?
31. Room B's Ceiling, made of Glass, Pearls, dry, if inside is 83°F and outside is 81°F?
32. How many mmBTUs are generated by running a AB-155C for 10 weeks?