Section I — Percentages

2 1 3

1. 67 is 96% of what number?

2. What is 64% of 331.25?

3. 73 is 32% of what number?

4. 87 is what percent of 435?

5. What is 48% of 364?

6. 57 is what percent of 1425?

7. 19 is 8% of what number?

8. 47 is what percent of 58.75?

Section II — Blueprint Calculations

9. Shape C, Scale = 32, molding job.

10. Shape A, Scale = 35, molding job.

11. Shape E, Scale = 35, carpet job.

12. Shape F, Scale = 50, panel job.

13. Shape H, Scale = 15, wire job.

14. Shape L, Scale = 36, brick job.

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

16. Shape Q, Scale = 48, tile job.

Section III — Carbon Footprint

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17. How many pounds of CO2 are released by burning 98 pounds of Black Ash?

18. Decane cycle, 633 (lb/hr) flowrate, outside is 77°F, inside 81°F?

19. Alcohol, methyl. 40 - 50oF cycle, 1122 (lb/hr) flowrate, outside is 40°F, inside 77°F?

20. How many pounds of CO2 are released by burning natural gas for 1 weeks in a ULT 105?

21. How many pounds of CO2 are released by burning 126 pounds of Jack Pine?

22. Propylene cycle, 981 (lb/hr) flowrate, outside is 80°F, inside 46°F?

23. How many mmBTUs are generated by burning 198 pounds of Ponderosa Pine?

24. Room A's Wall #3, made of Fire-clay brick 500oC, if inside is 77°F and outside is 74°F?

Section IV — Green Building

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25. Room A's Ceiling, made of Timber, oak, if inside is 78°F and outside is 71°F?

26. How many mmBTUs are generated by burning 90 pounds of Hackberry?

27. Propylene cycle, 1352 (lb/hr) flowrate, outside is 87°F, inside 54°F?

28. How many pounds of CO2 are released by burning diesel fuel for 4 days in a EVG 399?

29. How many pounds of CO2 are released by burning natural gas for 10 days in a ULT 299?

30. How many mmBTUs are generated by running a CGa-5 for 10 weeks?

31. Room B's 4 Walls, made of Plaster light, if inside is 70°F and outside is 18°F?

32. How many pounds of CO2 are released by burning 148 pounds of Hickory?