



Unit 3 MULTIPLICATION OF WHOLE NUMBERS

PRACTICAL PROBLEMS

Multiply the following quantities:

1.
$$\begin{array}{r} 16 \text{ inches} \\ \times 44 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 1,809 \text{ inches} \\ \times 62 \\ \hline \end{array}$$

9.
$$\begin{array}{r} \$1,205 \\ \times 57 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 56 \text{ liters} \\ \times 17 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 2,834 \text{ pounds} \\ \times 170 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 1,972 \text{ board feet} \\ \times 109 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 254 \\ \times 16 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 659 \text{ yards} \\ \times 212 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 1,257 \text{ gallons} \\ \times 857 \\ \hline \end{array}$$

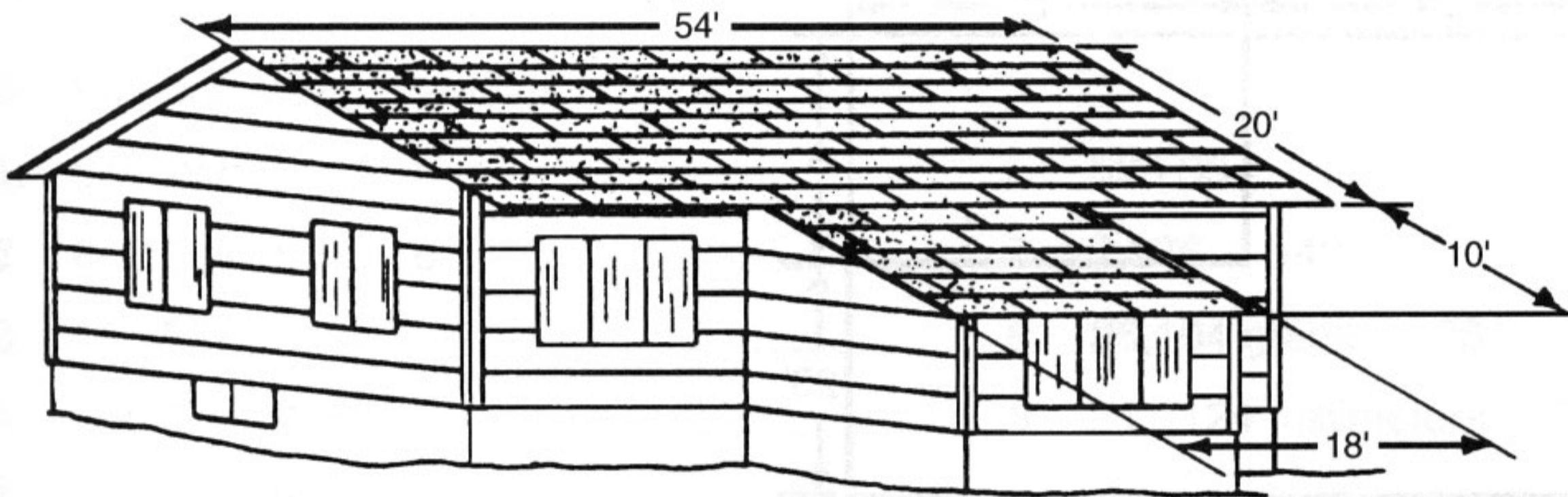
4.
$$\begin{array}{r} 352 \\ \times 75 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 350 \text{ hours} \\ \times 521 \\ \hline \end{array}$$

12.
$$\begin{array}{r} \$16,005 \\ \times 77 \\ \hline \end{array}$$

13. What is the total length of 25 pieces of door casing if each piece is 7 feet long? _____
14. Determine the total wall area of a room if each of the four walls has an area of 357 square feet. (Do not allow for openings.) _____
15. A carpenter places 200 linear feet of joists per hour. How many feet are placed in 8 hours? _____
16. The cost of a new garage is \$9,755. Find the total cost of building 13 garages of this kind. _____
17. Find the cost of 28 squares of shingles at \$37 per square. (A square is 100 square feet.) _____

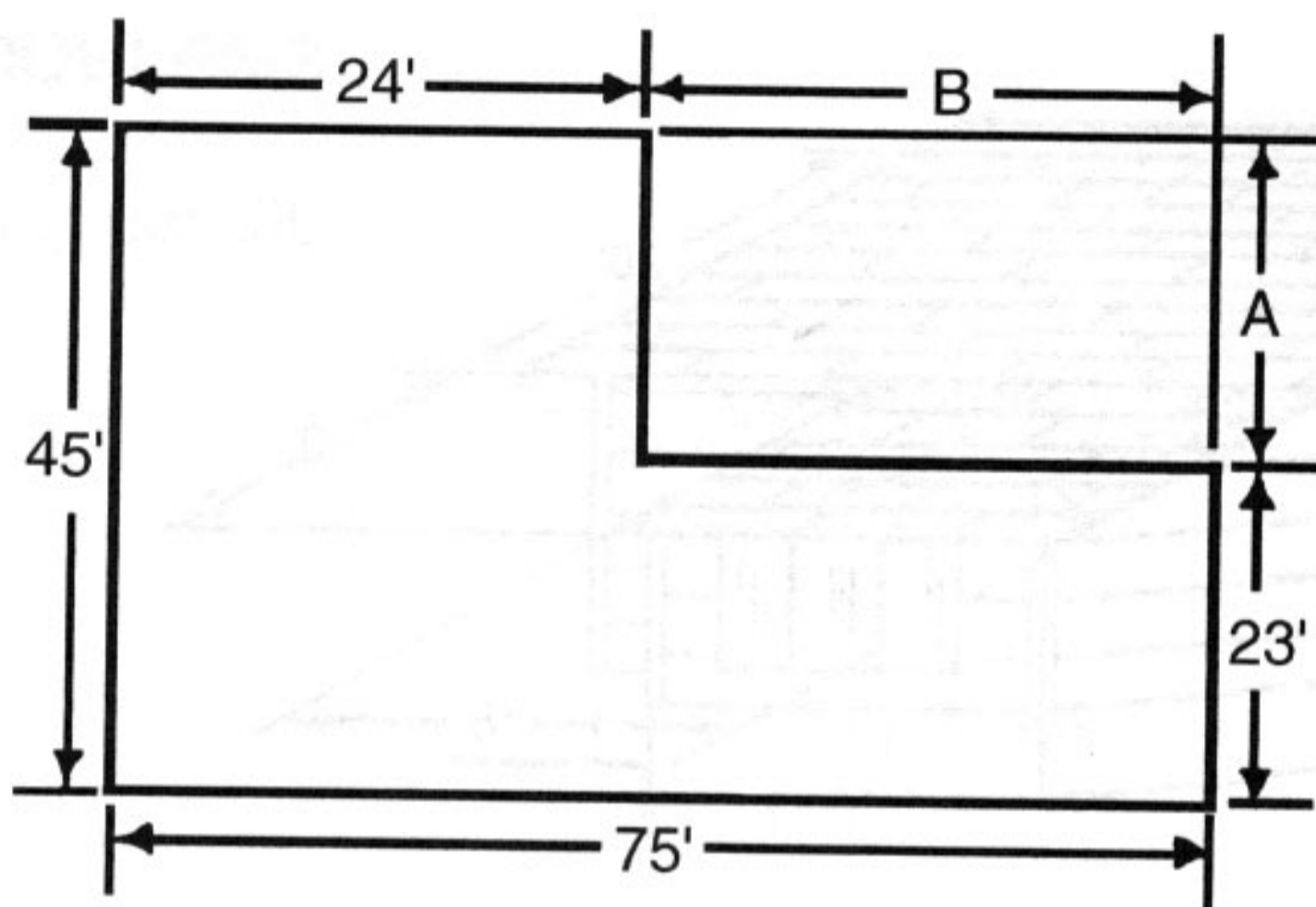
18. Allowing 760 shingles per square (100 square feet), how many shingles are required to cover 24 squares? _____
19. The illustration shows the dimensions of a gable roof that is to be shingled. Determine the number of square feet that the entire roof contains. (Assume that the opposite side has no projection.) _____



20. The area of a rectangle is found by multiplying the length by the height. A partition is 24 feet long by 8 feet high. Find the area of one side of the partition. _____
21. If there are 250 cedar shingles in one bundle, how many are there in 258 bundles? _____
22. In making a table, 19 board feet of oak are used, including waste. How much stock is needed to complete an order for 54 tables? _____
23. A breakfast set requires 43 board feet of lumber. How many board feet are needed for 53 sets that are to be made for a coffee shop? _____
24. Three hundred twenty galvanized nails are required to apply a square of shingles. How many nails are needed to lay 25 squares? _____
25. How many linear feet of furring are there in 9 bundles, each containing 10 pieces that are 12 feet long? _____
26. How many board feet of lumber are there in the following list of materials: 164 joists—32 board feet each; 16 girders—96 board feet each; 58 rafters—28 board feet each; 14 posts—44 board feet each; 296 boards—16 board feet each; and 164 studs—8 board feet each. _____

Note: To solve more complex problems, try to divide the problem into a series of easier steps. Solve problems 27 and 28 by following the steps outlined and using the illustrations given.

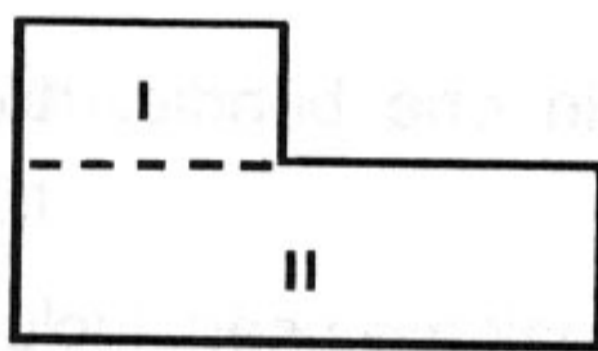
27. How many square feet of floor space are there in the building shown? _____



a. Find missing dimensions A and B.

A = _____
B = _____

b. Divide the total area into rectangular Sections I and II. Find the areas of Sections I and II.



Section I = _____
Section II = _____
Total = _____

(Area = length \times width)

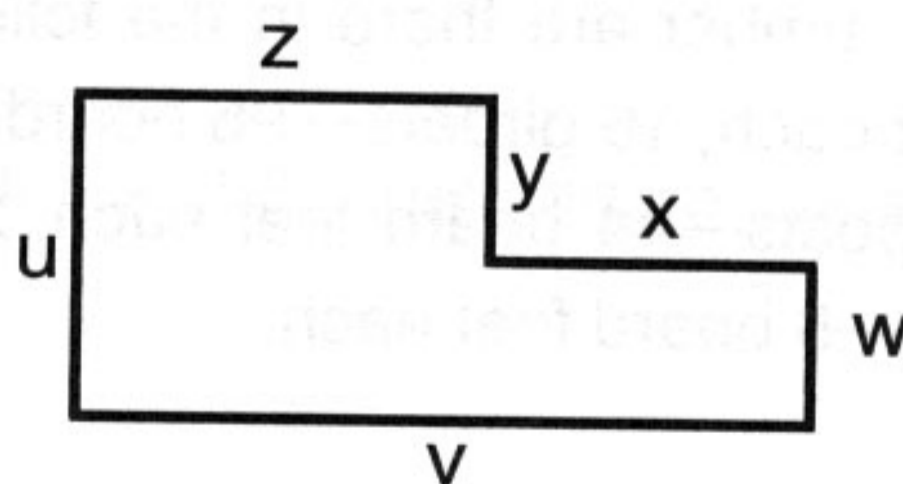
c. Add the areas of Section I and II to find the total area.

28. The walls of the building are 11 feet high. Find the total area of the outside walls.

a. Write dimensions A and B, found in problem 27. (Dimensions x and y below are dimensions A and B in number 27.)

A = _____
B = _____
u = _____
v = _____
w = _____
x = _____
y = _____
z = _____

b. Find the area of each wall. (Area = length \times height)



c. Find the total area.

Total = _____