Fraction Word Problems

show you work.............. remember units........................

Answer the following questions:

1. A metal pipe is cut into two pieces measuring \(\frac{7}{8}\) in. and \(\frac{7}{16}\) in. How long was the pipe before it was cut?

2. Three boxes of metal scrap at a construction site weigh \(17\frac{1}{2}\) lb., \(24\frac{3}{5}\) lb. and \(19\frac{7}{8}\) lb. respectively. What is the total weight of the boxes of scrap?

3. Find the overall length of this shaft below.

4. A piece of metal bar \(18\frac{9}{16}\) in. remains after a metal bar that is \(35\frac{3}{8}\) in. long is cut. What was the length of the cut-off piece?

5. A wooden gazebo has outside dimensions of \(12\) ft. \(3\frac{17}{32}\) in., \(9\) ft. \(8\frac{13}{16}\) in., and \(14\) ft. \(7\frac{21}{32}\) in. What is the perimeter of the gazebo?

6. A propane tank holds 95 litres (L) of fuel. If the tank is \(\frac{2}{5}\) full, how many litres of fuel are necessary to fill the tank?
7. Find the dimensions C and D in the motor shaft below:

8. Manufacturing one wrench requires \( \frac{9}{16} \) inches of stock. What length of \( \frac{1}{2} \)-inch hexagonal steel is used in making 72 wrenches?

9. An electrical apprentice requires 14 strips of wire that are each \( \frac{3}{4} \)-in. long in order to complete a wiring project. What is the total length of wire required?

10. A pipe that is \( 23 \frac{1}{4} \) in. long is cut into 5 equal pieces. If \( \frac{3}{16} \) in. is wasted on each cut, how long will each piece be?

11. A hole must be drilled in a stud to accommodate an \( \frac{7}{16} \) in. diameter copper tube wrapped in \( \frac{3}{8} \) in. insulation. What size hole must be drilled in the stud?

Answers:

1. \( 18 \frac{1}{16} \) in.
2. \( 61 \frac{39}{40} \) lb.
3. \( 3 \frac{15}{32} \) in.
4. \( 16 \frac{13}{16} \) in.
5. 37 ft.
6. 57 L
7. 8.
8. \( 670 \frac{1}{2} \) in.
9. \( 61 \frac{1}{4} \) in.
10. \( 4 \frac{1}{2} \) in.
11. \( 1 \frac{3}{16} \) in.