

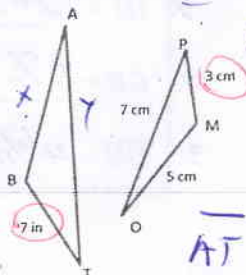
NAME: MASTER

DATE: 10 JAN

Write & Solve a Proportion for each question.

When necessary, round your answer to the nearest hundredth.

1. $\triangle BAT \sim \triangle MOP$. Determine the length of \overline{AT} and \overline{BA} (14 pts each)



$$\frac{\overline{AB}}{5 \text{ cm}} = \frac{7 \text{ in}}{3 \text{ cm}} \quad x = \frac{35}{3} \quad 11\frac{2}{3}$$

$$\frac{y}{7 \text{ cm}} = \frac{7 \text{ in}}{3 \text{ cm}} \quad y = \frac{49}{3} = 16\frac{1}{3}$$

y	$\overline{AT} = 16\frac{1}{3} \text{ in}$
x	$\overline{BA} = 11\frac{2}{3} \text{ in}$

2. (12 pts) The USS Ronald Reagan, our nation's newest aircraft carrier is 1092 feet long from bow to stern. A completed model of the USS Ronald Reagan is $3\frac{1}{2}$ ft long. What is the scale of the model?

$$\frac{1 \text{ ft}}{x \text{ ft}} = \frac{3.5 \text{ ft}}{1092 \text{ ft}}$$

$$3.5 \overline{) 10920}$$

The scale is
1:312

3. A scale drawing has a scale of $\frac{1}{4}$ inch:12ft. (straight from Pract 5-7)

- A. (12 pts) Find the length on the drawing for a length of 40 ft.

$$\frac{\frac{1}{4} \text{ in}}{12 \text{ ft}} = \frac{x \text{ in}}{40 \text{ ft}}$$

$$\text{also } \frac{1 \text{ in}}{48 \text{ ft}} =$$

A. $\frac{5}{6} \text{ in}$
25 in

- B. (12 pts) Find the actual length for a drawing length of $\frac{3}{8}$ inch.

$$\frac{\frac{1}{4} \text{ in}}{12 \text{ ft}} = \frac{\frac{3}{8} \text{ in}}{x \text{ ft}}$$

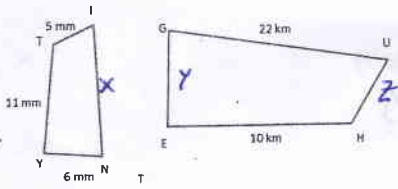
$$x = 18 \text{ ft}$$

B. 18 ft

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4. Quadrilateral TINY ~ Quadrilateral HUGE. Determine the missing lengths. (12 pts each)



$24 \frac{1}{5} \text{ km}$

x	$\overline{IN} = 24.2 \text{ km}$
y	$\overline{GE} = 5 \frac{5}{11} \text{ or } 5.45 \text{ km}$
z	$\overline{UH} = 4 \frac{6}{11} \text{ or } 4.55 \text{ km}$

$\frac{11}{22} = \frac{x}{10} \Rightarrow x = \frac{22 \times 11}{10} = 24 \frac{1}{5} \text{ km}$

$\frac{6}{11} = \frac{y}{10} \Rightarrow y = \frac{6 \times 10}{11} = 5 \frac{5}{11} \text{ km}$

$\frac{5}{11} = \frac{z}{10} \Rightarrow z = \frac{5 \times 10}{11} = 4 \frac{6}{11} \text{ km}$