

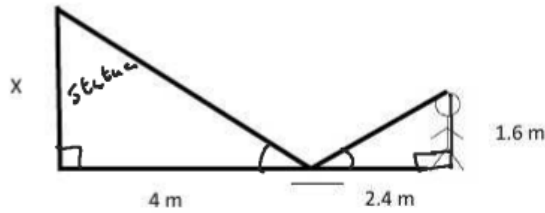
Math 3

Name \_\_\_\_\_

Solving Similar Triangles

Date \_\_\_\_\_

1. A statue, honoring Ray Hnatyshyn (1934-2002), can be found on Spadina Crescent East, near the University Bridge in Saskatoon. Use the information below to determine the unknown height of the statue.

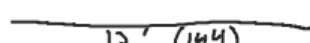


$$\frac{1.6}{X} = \frac{2.4}{4} \quad \frac{2.4X = 6.4}{2.4} \quad \frac{2.4}{2.4} \quad X = 2.6 \text{ m}$$

$$\frac{1.6}{2.4} = \frac{X}{4}$$

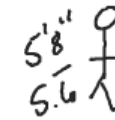


2. A tree 24 feet tall casts a shadow 12 feet long. Brad is 5 feet 8 inches tall. How long is Brad's shadow?



$$\frac{2}{1} = \frac{68}{X} \quad \frac{8}{12}$$

(68)

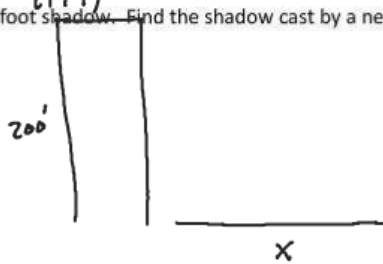
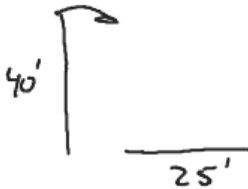


$$\frac{288}{68} = \frac{144}{X}$$

$$\frac{288X = 9792}{288} \quad \frac{9792}{288} \quad X = 34''$$

$$X = 2.95'$$

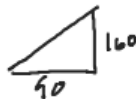
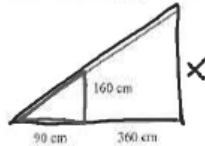
3. A 40-foot flagpole cast a 25-foot shadow. Find the shadow cast by a nearby building 200 feet tall.



$$\frac{40}{200} = \frac{25}{X}$$

$$40X = 5000 \quad X = 125'$$

4. A girl 160 cm tall, stands 360 cm from a lamp post at night. Her shadow from the light is 90 cm long. How high is the lamp post?



$$\frac{90}{450} = \frac{160}{X}$$

$$90X = 72,000$$

$$X = 800 \text{ cm}$$

7. To calculate the length of a marsh, a surveyor produced the following diagram. Find the length of the marsh to the nearest tenth of a unit.



$$\frac{EC}{AE} = \frac{DC}{AB}$$

$$\frac{3.6}{18.6} = \frac{16.2}{X}$$

$$3.6x = 301.32$$

$$x = 83.7 \text{ m}$$