

# January 20, 2015 <sup>1<sup>st</sup></sup> <sub>2<sup>nd</sup></sub> Starter

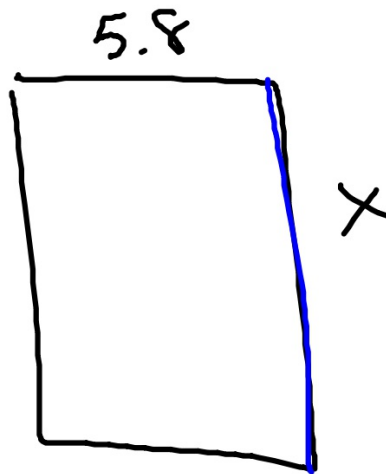
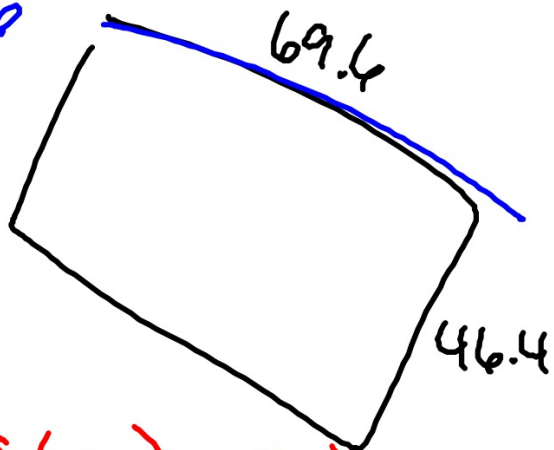
1 2 4 6 7 . . . . . □ □ □

There are 30 houses on Bruin Boulevard and each of them need to be numbered. If none of the numbers can use a 3 and none can be multiples of 5 or 7, what is the number of the last house?



Fontainer

#6



$$\begin{aligned} 5.8 \left( \frac{69.6}{46.4} \right) &= \frac{(X) 46.4}{(5.8) 46.4} \end{aligned}$$

$$\frac{403.68}{46.4} = \frac{46.4X}{46.4}$$

$$8.7 = X$$

## 1/20 Shadow Problems using Proportion

**Remember:** You can find missing measurements in similar figures by using proportions.

These two triangles are similar.

Find the missing side measurement

$$\frac{6 \cdot x}{6 \cdot 10} = \frac{8 \cdot 10}{6 \cdot 10}$$

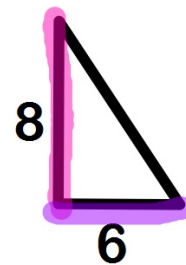
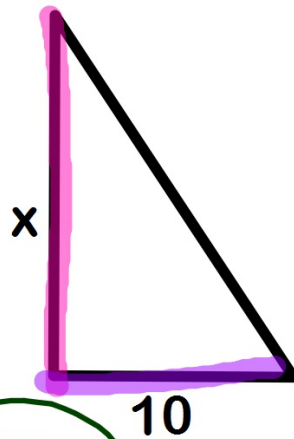
$$\frac{6x}{60} = \frac{80}{60}$$

$$\frac{6x}{6} = \frac{80}{6}$$

$$x = 13.333\dots$$

Round to  
the tenths,

13.3

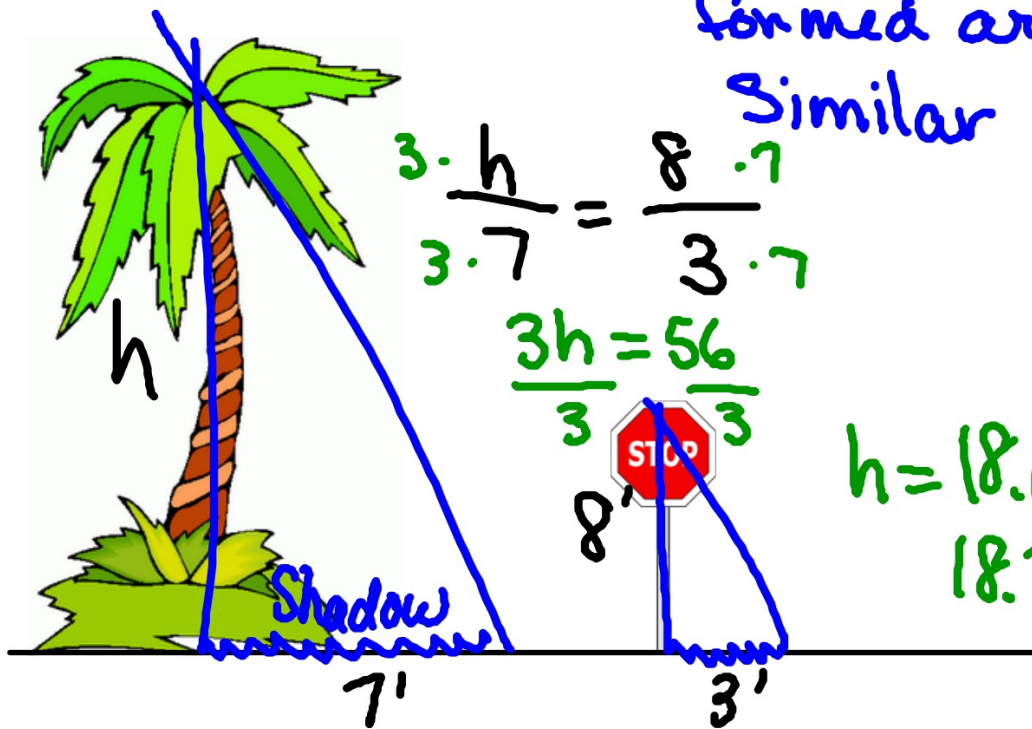




You can find the height of tall things without ever leaving the ground! Use Proportions!!

How tall is this palm tree?

2  $\Delta$ 's  
formed are  
similar



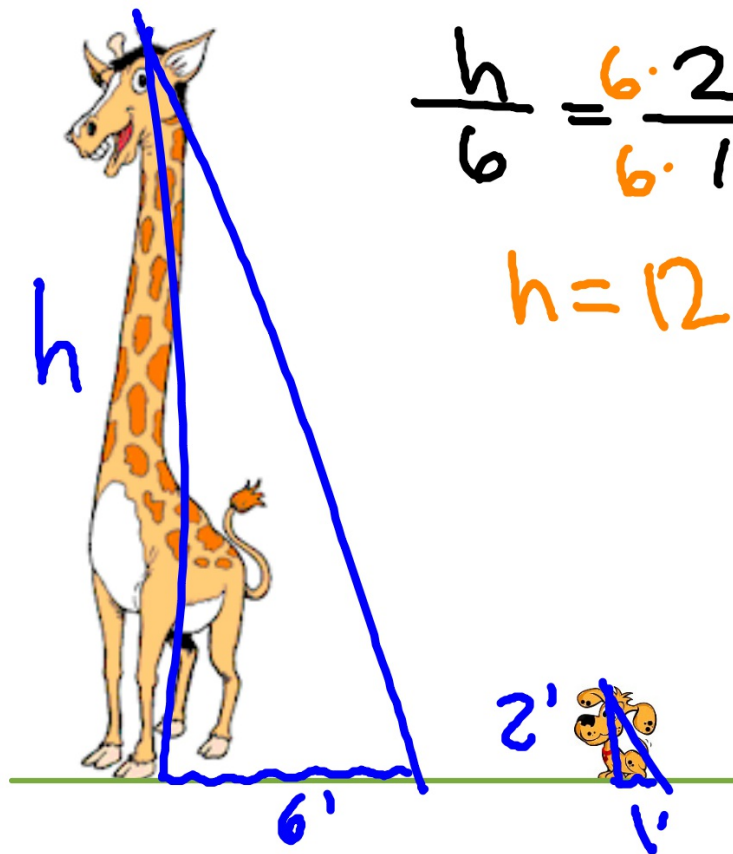
$$\frac{3 \cdot h}{3 \cdot 7} = \frac{8 \cdot 7}{3 \cdot 7}$$

$$\frac{3h}{3} = \frac{56}{3}$$

$$h = 18.666.$$
$$18.7'$$



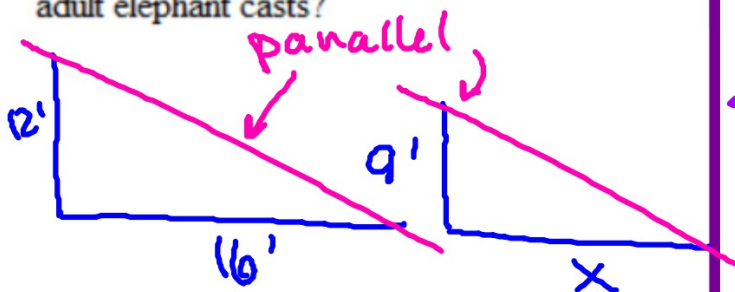
Find the height of this giraffe.



$$\frac{h}{6} = \frac{6 \cdot 2}{6 \cdot 1}$$

$$h = 12'$$

If a 12 ft tall statue casts a 16 ft long shadow then how long is the shadow that a 9 ft tall adult elephant casts?

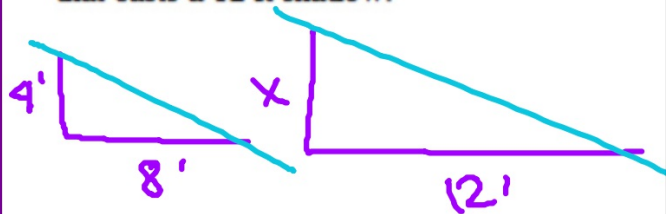


$$\frac{3 \cdot 12}{3 \cdot 16} = \frac{9 \cdot 4}{x \cdot 4}$$

$$\frac{48}{4} = \frac{4x}{4}$$

$$12\text{ft} = x$$

A bird bath that is 4 ft tall casts a shadow that is 8 ft long. Find the height of a woman that casts a 12 ft shadow.



$$\frac{3 \cdot 4}{3 \cdot 8} = \frac{x \cdot 2}{12 \cdot 2}$$

$$\frac{12}{2} = \frac{2x}{2}$$

$$6\text{ft} = x$$

# Homework

Yellow WS3

Due Wednesday