

6.2 – Hand in assignment

Name: _____

1. The scale on a map is 2.5 cm:500 m.

a) What distance is represented by a 12.5-cm segment on the map?

$$\frac{12.5}{2.5} = 5 \quad 5(500) = \underline{2500 \text{ m}}$$

b) How long would a segment on the map be if it represented 1.5 km?

$$\frac{1500 \text{ m}}{500 \text{ m}} = 3 \quad 2.5(3) = \underline{7.5 \text{ cm}}$$

2. Show whether a rectangular prism that is 6 m x 10 m x 8 m is similar to one that is 4 m x 7 m x 5 m.

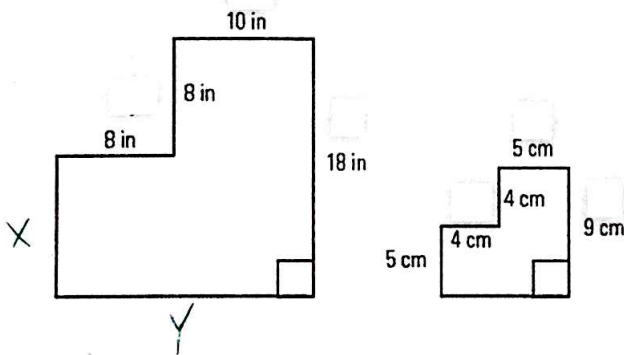
$$\frac{6}{4} = \frac{3}{2}$$

$$\frac{10}{7} = \frac{10}{7}$$

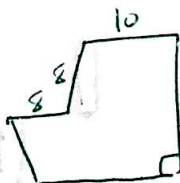
$$\frac{8}{5} = \frac{8}{5}$$

Not similar

3. Colin states that the following two figures are similar, but Tai disagrees, saying that they don't have enough information. Who is right? Explain and show your calculations.

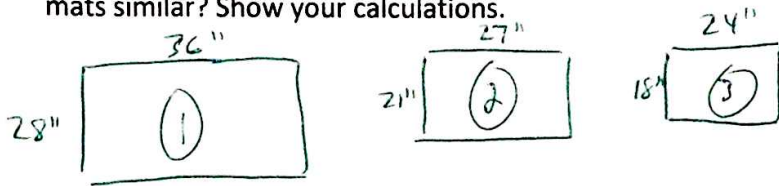


We don't have enough info since we don't know the angles and we don't know X and Y



← the bigger figure could be drawn this way

4. While he was at the pet food store, Jeremy saw three different rectangular sized dog mats. They measured 36 inches by 28 inches, 27 inches by 21 inches, and 24 inches by 18 inches. Are all the mats similar? Show your calculations.



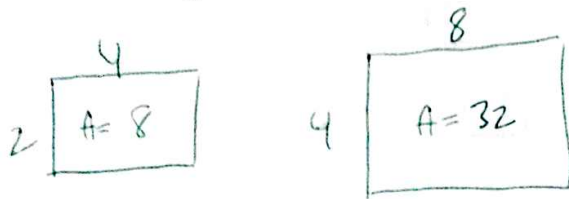
$$1 + 2: \frac{36}{27} = 1.3 \quad \frac{28}{21} = 1.3 \Rightarrow \text{similar}$$

$$1 + 3: \frac{36}{24} = 1.5 \quad \frac{28}{18} = 1.5 \Rightarrow \text{not similar}$$

$$2 + 3: \frac{27}{24} = 1.125 \quad \frac{21}{18} = 1.16 \Rightarrow \text{not similar}$$

Only Mat 1 and 2
are similar
3

5. Using two similar rectangles show whether their areas are in the same proportion as the sides.



Side Lengths

$$\frac{8}{4} = 2$$

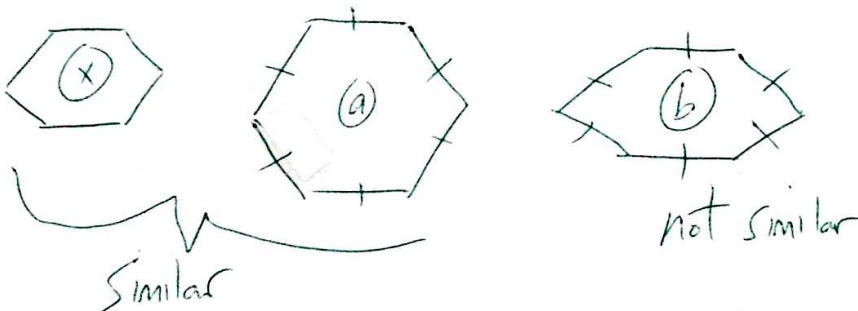
$$\frac{4}{2} = 2$$

Area

$$\frac{32}{8} = 4$$

Area doesn't have the same
proportion as side lengths
in similar rectangles.
2

6. Pierre drew two regular hexagons (6-sided figures with all sides equal in length). Are the two hexagons similar? Why or why not? Explain and include a diagram.



We need to know angles. A & B have proportionate
side lengths to X but B is not similar to X
2