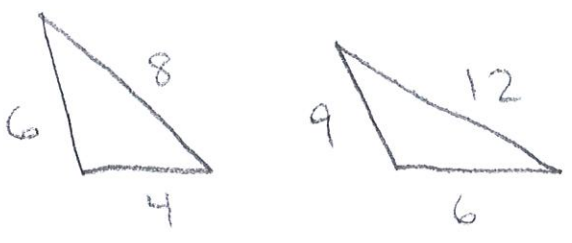


④



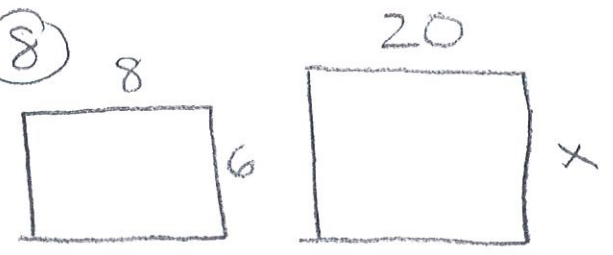
\* write a proportion  
(multiple proportions possible!)

$$h \frac{6}{4} = \frac{9}{6} h$$

$$b \frac{4}{6} = \frac{6}{9} b$$

Yes, since corr sides are proportional, angles are congruent.

⑧



$$\frac{8}{6} = \frac{20}{x}$$

$$8x = 120$$

$$\frac{8x}{8} = \frac{120}{8}$$

$$x = 15$$

⑨



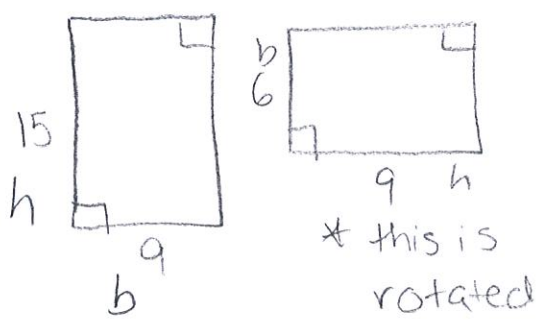
$$\frac{15}{9} = \frac{x}{4}$$

$$9x = 60$$

$$\frac{9x}{9} = \frac{60}{9}$$

$$x = 6.\bar{6}$$

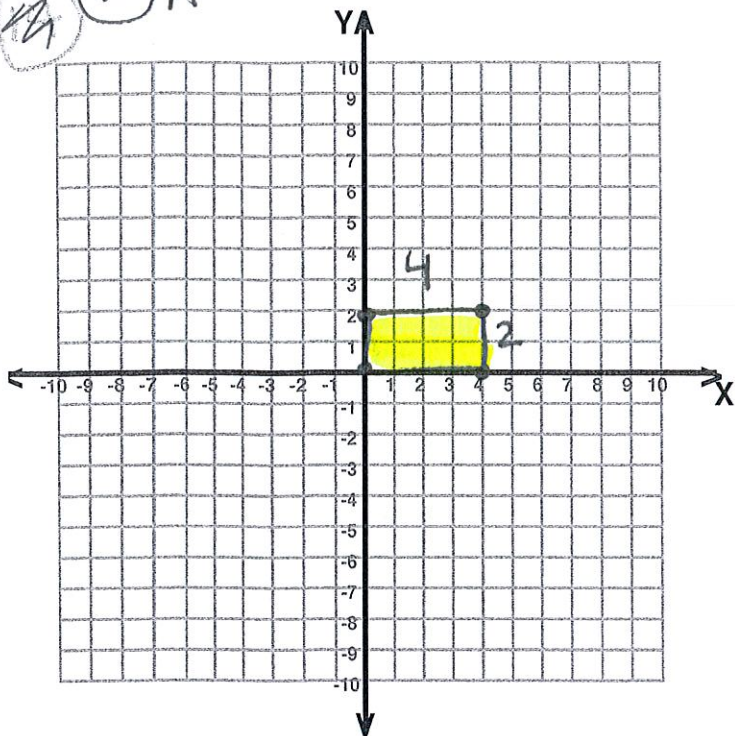
⑤



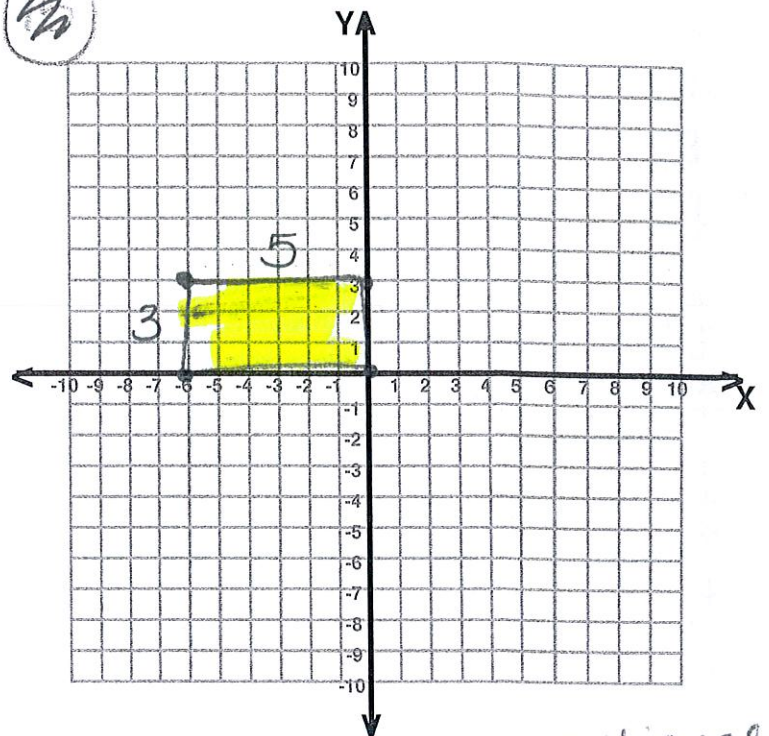
$$\frac{15}{9} = \frac{9}{6}$$

No, cross products are not equal!

6A



6B

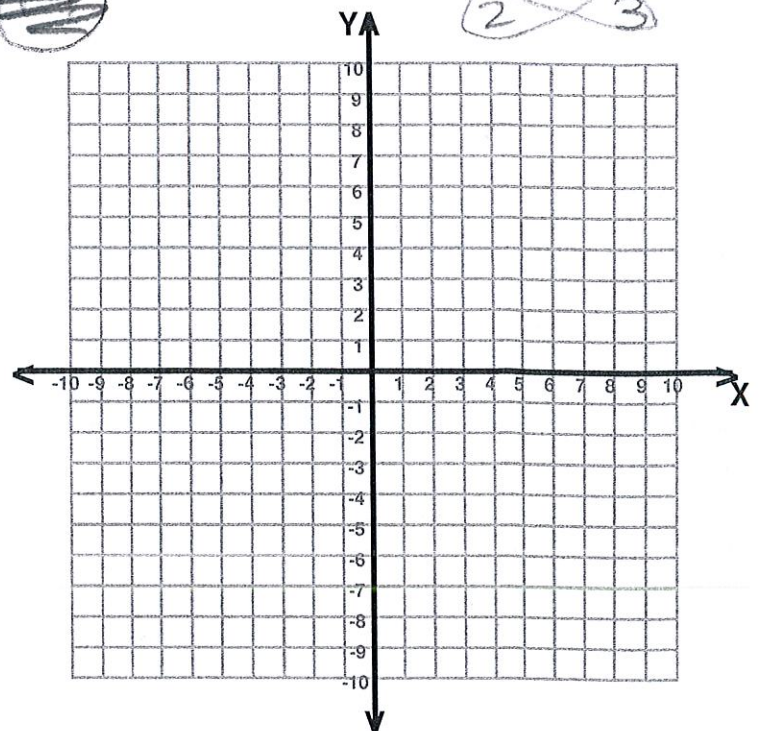
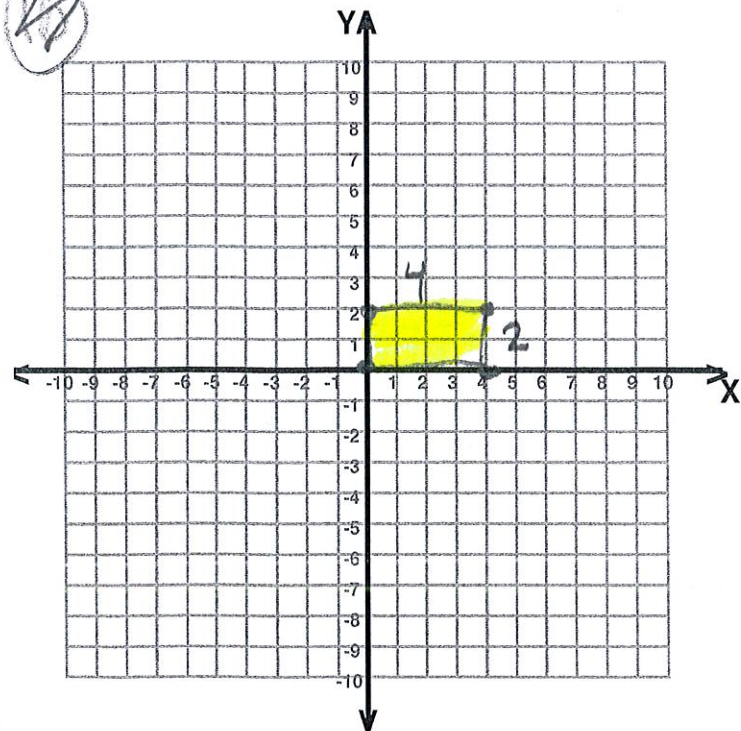


A+C,  
Same length + width

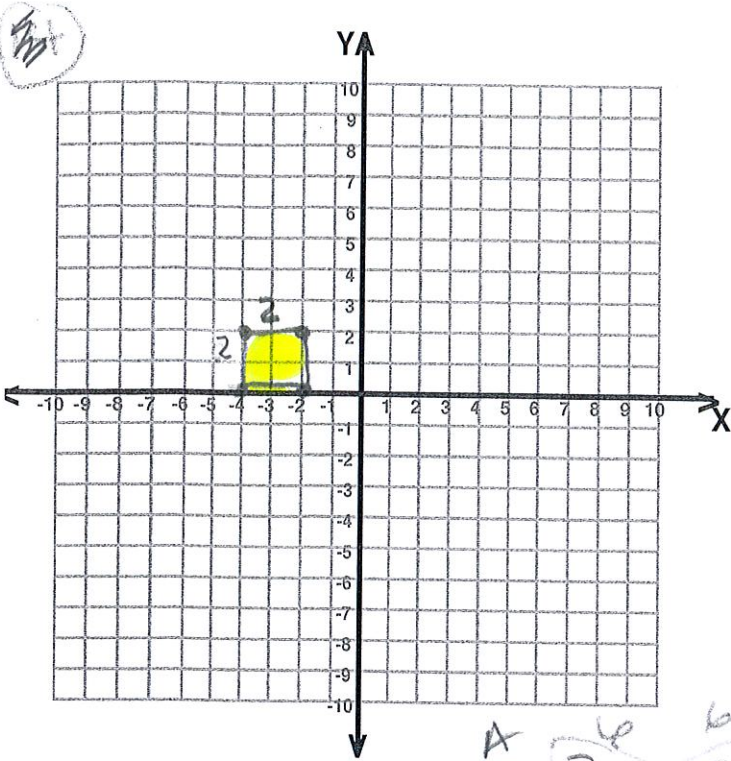
B is not proportional  
to A or C

$$\frac{4}{2} = \frac{5}{3}$$

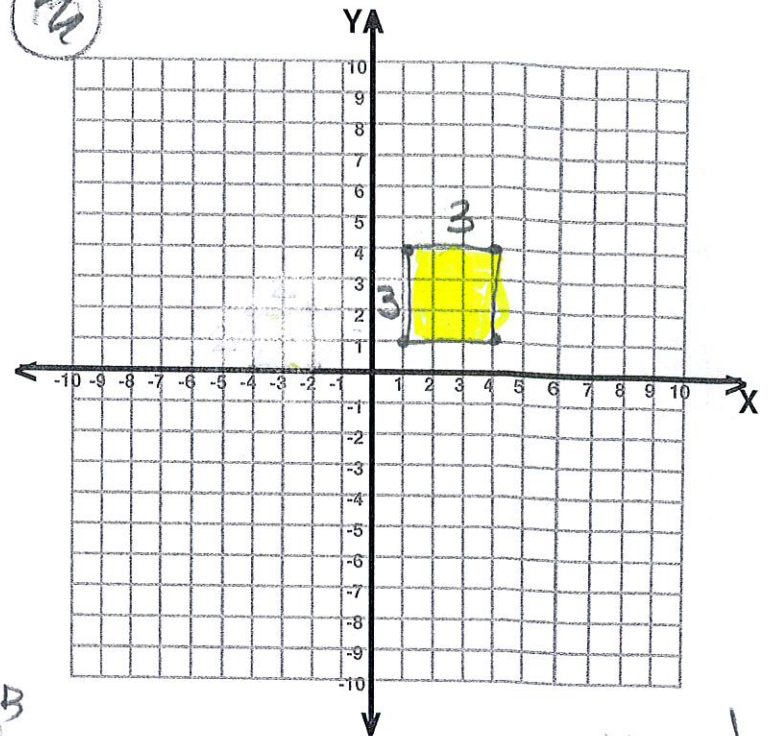
6C



7A



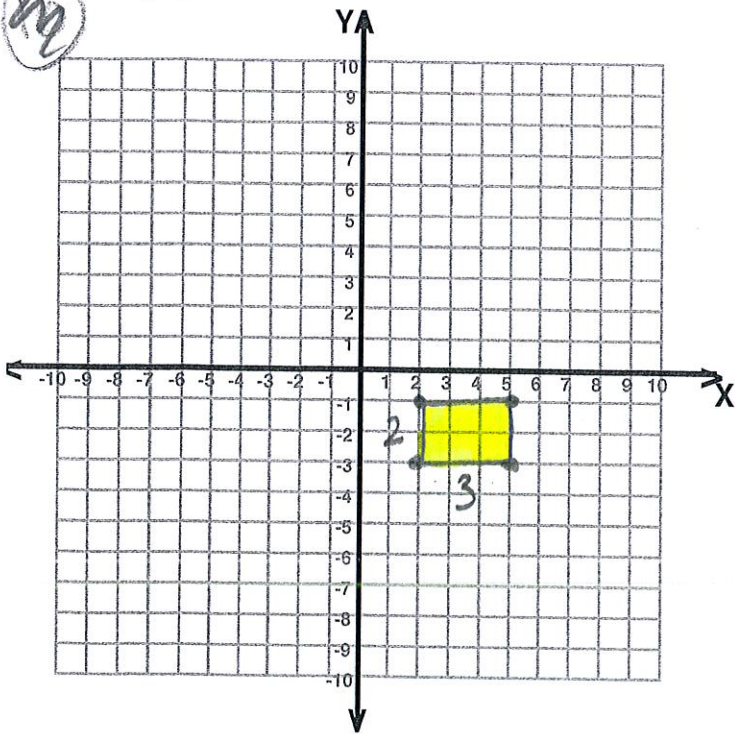
7B



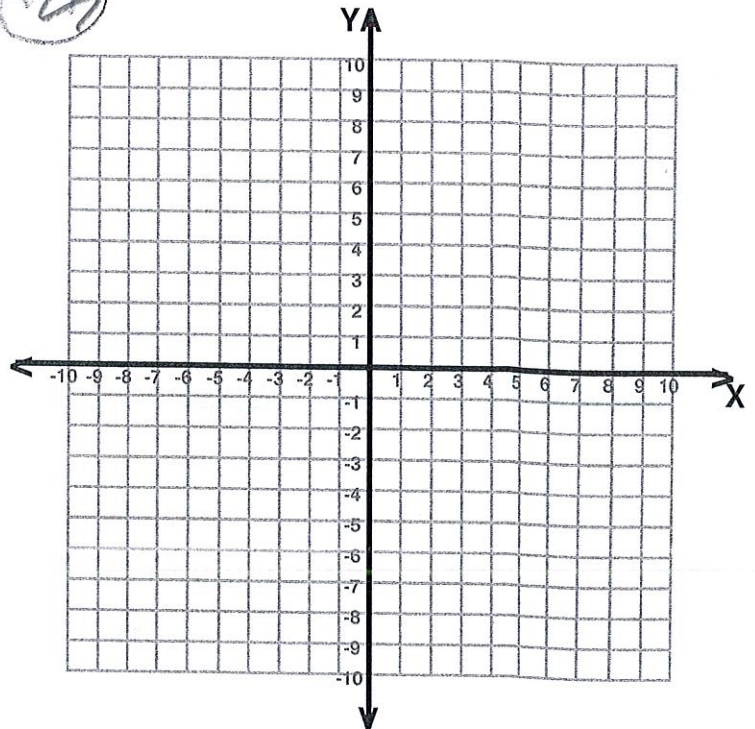
$$\frac{2}{2} = \frac{3}{3}$$

A + B are similar!

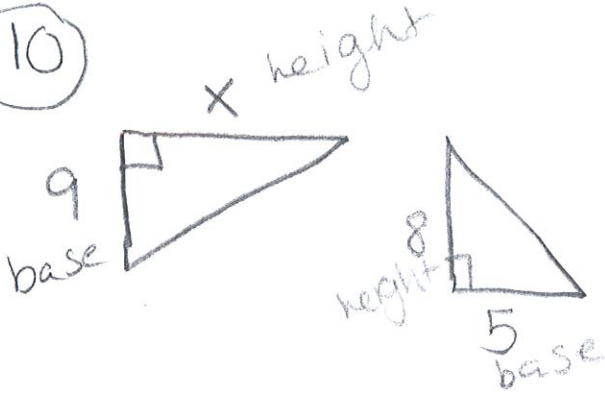
7C



7D



10



$$\frac{9}{x} = \frac{5}{8}$$

$$5x = 72$$

$$x = 14.4$$

11

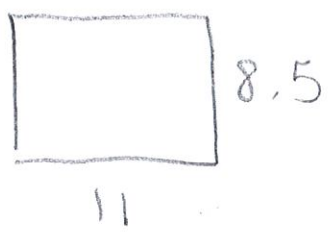


$$\frac{9}{6} = \frac{21}{x}$$

$$9x = 126$$

$$x = 14$$

12



$$\frac{63}{36} = \frac{8.5}{11}$$

306  
693

not similar

13

$$\frac{L}{W} = \frac{30}{18} = \frac{50}{x}$$

$$\frac{30x}{30} = \frac{900}{30}$$

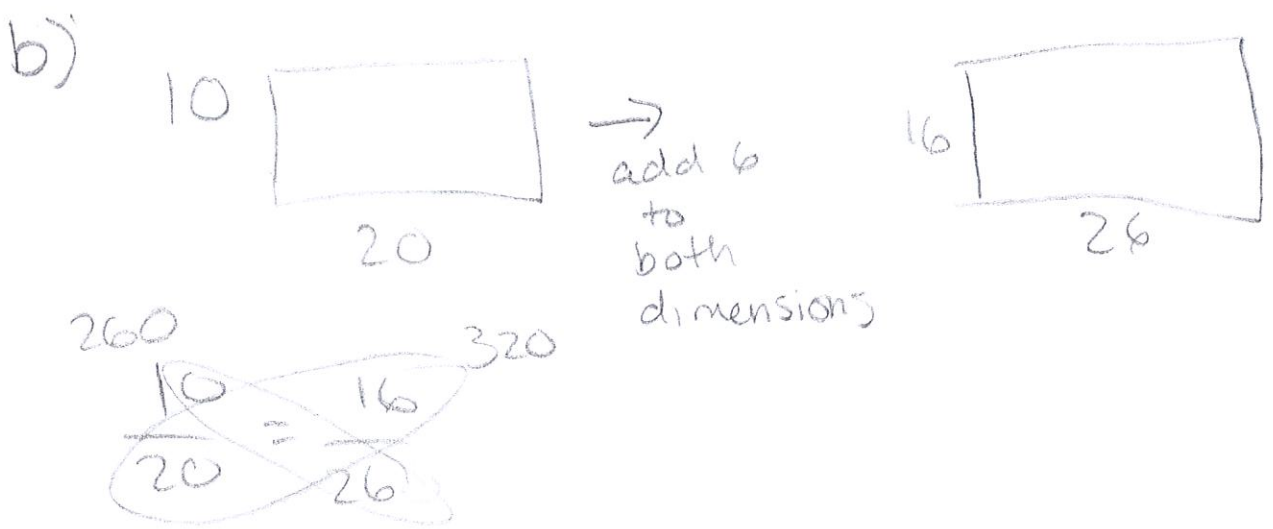
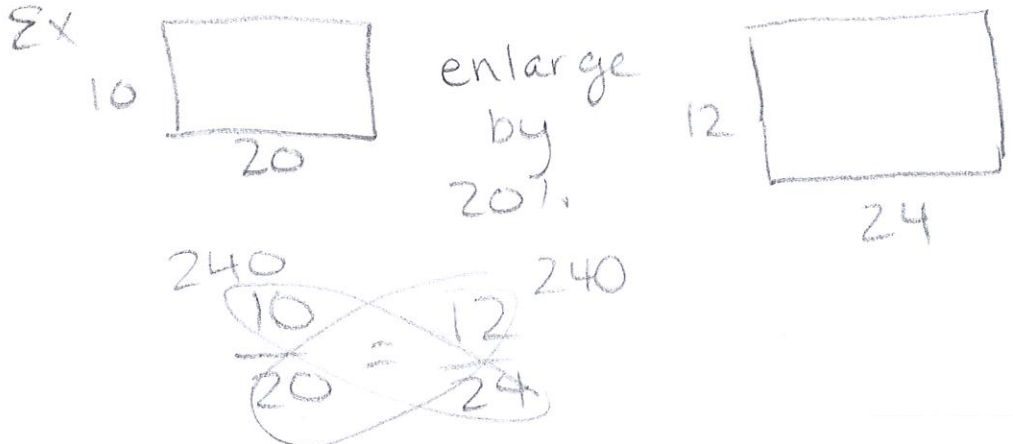
$x = 30$  inches wide

14

- a) sometimes, depends on measurements
- b) always, same side lengths all around
- c) sometimes, depends on measurements
- d) never, diff shapes

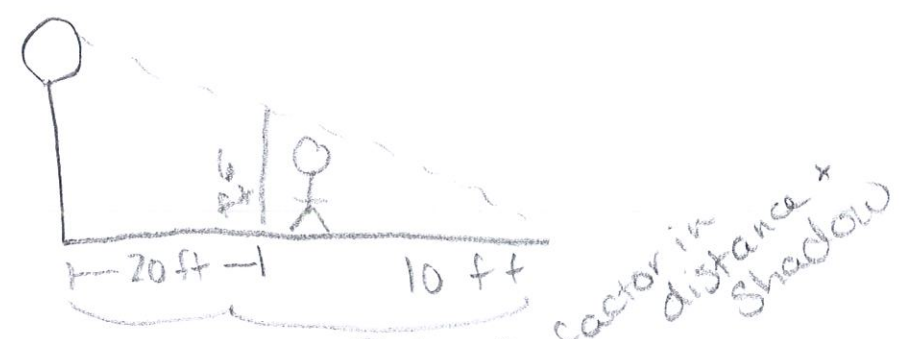
16) a) yes, each side is increased by the same factor

- Test out <sup>random</sup> numbers to try



NO!

17



factor in distance = shadow

First triangle

H  ~~$\frac{x}{30}$~~

L  ~~$\frac{6}{10}$~~

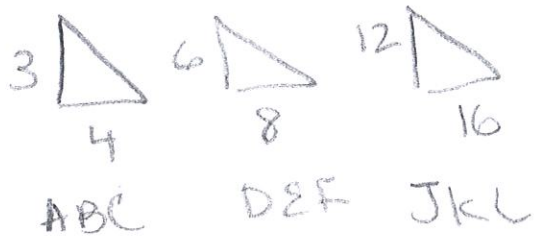
$10x = 180$

$x = 18$

18 is three times taller than the person's height

18) yes, a scale is a ratio applied to each length and you use the same length each time.

20) Yes, create random triangles!



$$\frac{3}{4} = \frac{12}{16}$$

48







