

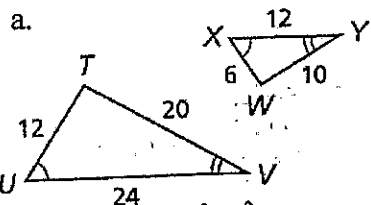
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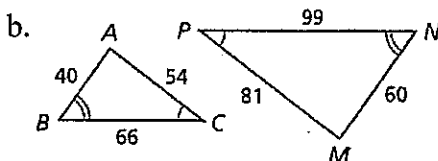
Period:

HW #8-8: Test Review Worksheet

1. Determine whether the polygons are similar. If so, determine the scale factor and write the similarity statement.

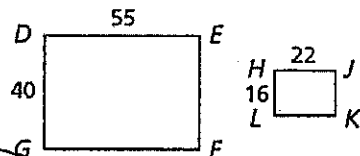


$\Delta S \sim$ by $AA \sim$
 $k = 2$ if $\Delta XYZ \sim \Delta TUV$
 $k = \frac{1}{2}$ if $\Delta TUV \sim \Delta XYZ$



$\Delta S \sim$ by $AA \sim$
 $k = \frac{2}{3}$ if $\Delta PMN \sim \Delta CAB$
 $k = \frac{3}{2}$ if $\Delta CAB \sim \Delta PMN$

- c. DEFG and HJKL are rectangles



all corresp. $\angle$ s are $\cong$

$$\frac{40}{16} = \frac{55}{22}$$

$$2.5 = 2.5 \checkmark$$

$k = \frac{5}{2}$ if $HJKL \sim DEFG$

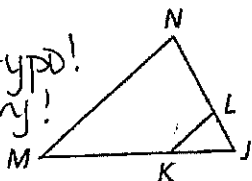
$k = \frac{2}{5}$ if $DEFG \sim HJKL$

2. Write a two-column proof.

Given: $JL = \frac{1}{3}JN$ and $JK = \frac{1}{3}JM$

Prove: $\Delta JKL \sim \Delta JMN$

$\leftarrow$ typo!
 Sorry!



Statements

Reasons

① $JL = \frac{1}{3}JN$ and $JK = \frac{1}{3}JM$

① given

② $\frac{JL}{JN} = \frac{1}{3}$ and $\frac{JK}{JM} = \frac{1}{3}$

② division prop. =

③ $\frac{JL}{JN} = \frac{JK}{JM}$

③ trans. prop. =

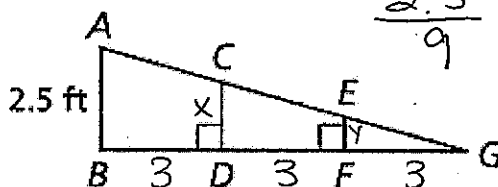
④ $\angle LJK \cong \angle NJM$

④ reflex. prop. $\cong$

⑤ $\Delta JKL \sim \Delta JMN$

⑤ SAS $\sim$

3. Derrick is building a skateboard ramp, as shown. Given that $BD = DF = FG = 3$ ft, find CD and EF to the nearest tenth of a foot.



$$\frac{2.5}{9} = \frac{x}{6}$$

$$x = \frac{5}{3}$$

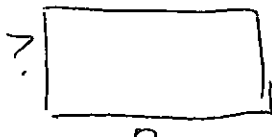
$$CD \approx 1.7 \text{ ft}$$

$$\frac{2.5}{9} = \frac{y}{3}$$

$$y = \frac{5}{6}$$

$$EF \approx 0.8 \text{ ft}$$

4. Alana has a photograph that is 5 in long and 3.5 in wide. She enlarges it so that its length is 8 in. What is the width of the enlarged photograph?

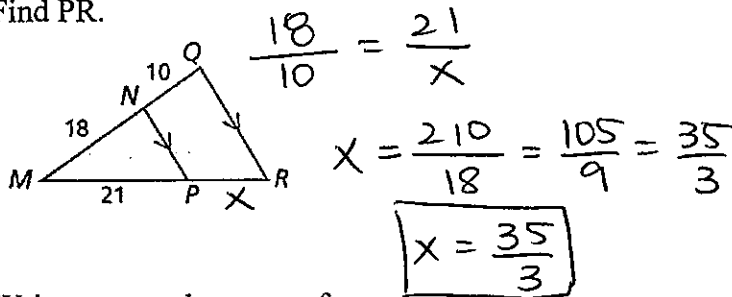


$$\frac{3.5}{x} = \frac{5}{8}$$

$$x = 5.6$$

width is 5.6 inches

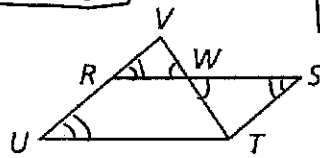
5. Find PR.



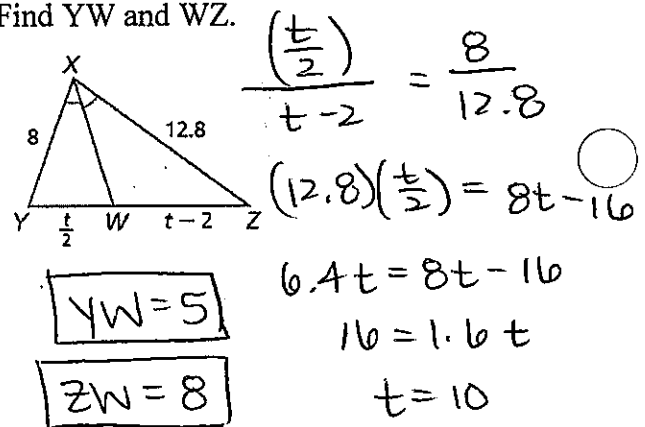
7. Write a two-column proof.

Given: parallelogram RSTU

Prove: $\triangle RWV \sim \triangle SWT$



6. Find YW and WZ.



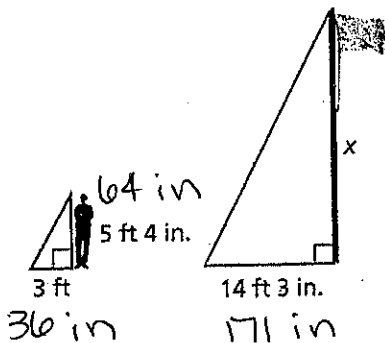
Statements

Reasons

- ① RSTU is a ||-gram
- ② $\angle VWR \cong \angle TWS$
- ③ $\angle U \cong \angle S$
- ④ $\overline{RS} \parallel \overline{UT}$
- ⑤ $\angle U \cong \angle VRW$
- ⑥ $\angle VRW \cong \angle S$
- ⑦ $\triangle RWV \sim \triangle SWT$

- ① given
- ② vertical $\angle s \cong$
- ③ ||-gram $\rightarrow$ opp. $\angle s \cong$
- ④ ||-gram $\rightarrow$ opp. sides ||
- ⑤ || $\rightarrow$ corresp. $\angle s \cong$
- ⑥ Trans. prop. $\cong$
- ⑦ AA $\sim$

8. To find the height of a flagpole, Casey measured her own shadow and the flagpole's shadow. Given that Casey's height is 5 ft 4 in, what is the height of the flagpole?



$$\frac{36}{171} = \frac{64}{x}$$

$x = 304 \text{ in}$

$$x = 25 \frac{1}{3} \text{ ft}$$

$x = 25 \text{ ft } 4 \text{ in}$

$\star \frac{1}{3}$ of a foot is 4 inches

9. Figure A has an area of 4928 ft^2 and one of the side lengths is 88 ft. Figure B has an area of 77 ft^2 . Find the corresponding length of Figure B.

$$\left(\frac{88}{x}\right)^2 = \frac{4928}{77}$$

$$\frac{7744}{x^2} = \frac{4928}{77}$$

$$4928x^2 = 596288$$

$$\sqrt{x^2} = \sqrt{121}$$

$$x = \pm 11$$

$$x = 11$$

Corresp. side length in fig. B is 11 ft

10. In general, if the scale factor between two figures is k , then the ratio of the perimeters is k and the ratio of the areas is k^2 .