

Name: Key

Unit 6: Similar Triangles

Date: _____ Bell: _____

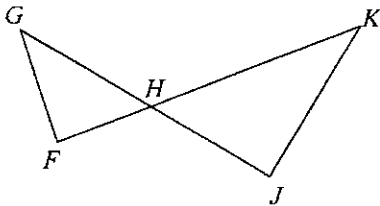
Homework 2: Similar Figures



**** This is a 2-page document! ****

Directions: List all congruent angles and write a proportion that relates the corresponding sides.

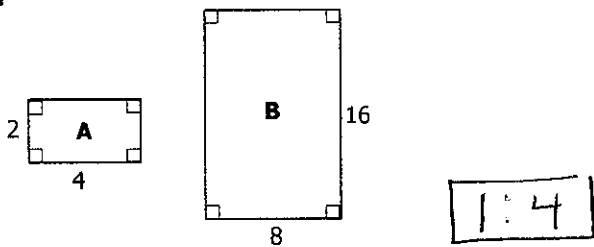
1. $\triangle FGH \sim \triangle JKH$



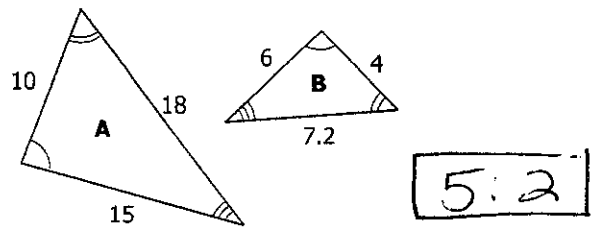
Angles	Sides
$\angle F \cong \angle J$	$\frac{FG}{JK} = \frac{GH}{KH} = \frac{FH}{JH}$
$\angle G \cong \angle K$	
$\angle H \cong \angle H$	

Directions: The pairs of polygons below are similar. Give the scale factor of figure A to figure B.

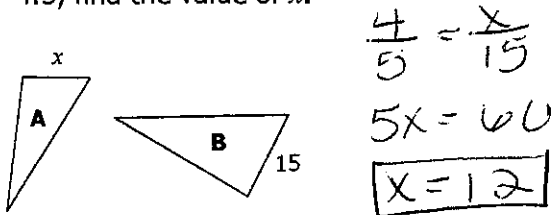
2.



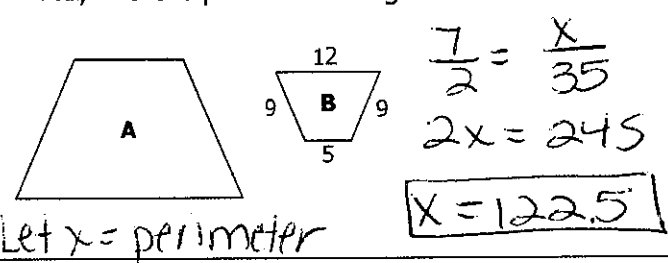
3.



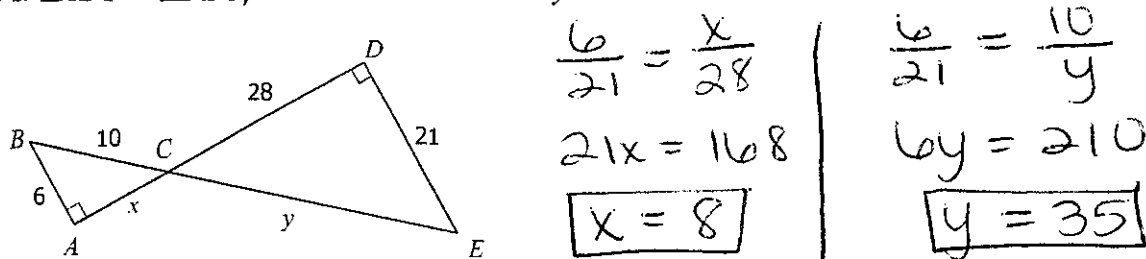
4. If the scale factor of figure A to figure B is 4:5, find the value of x.



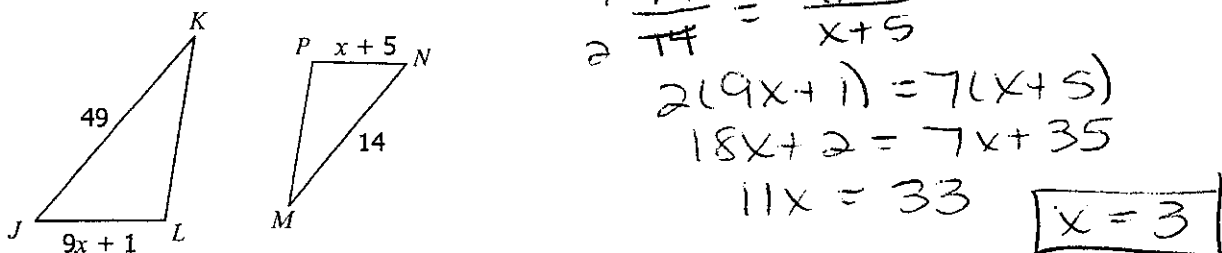
5. If the scale factor of figure A to figure B is 7:2, find the perimeter of figure A.



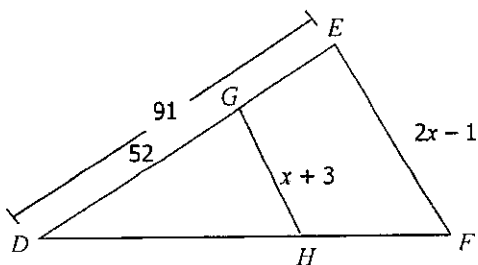
6. If $\triangle ABC \sim \triangle DEC$, find the value of x and y.



7. If $\triangle JKL \sim \triangle NMP$, find the value of x.



8. If $\triangle DGH \sim \triangle DEF$, find the value of x .



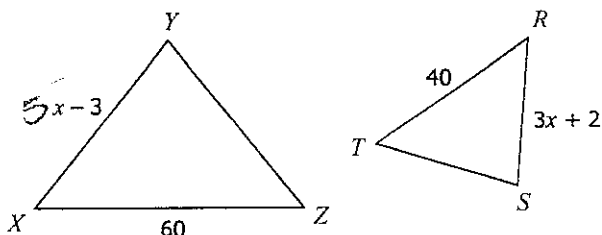
$$\frac{4}{7} = \frac{(x+3)}{(2x-1)}$$

$$4(2x-1) = 7(x+3)$$

$$8x-4 = 7x+21$$

$$\boxed{x = 25}$$

9. If $\triangle XYZ \sim \triangle RST$, find the value of x .



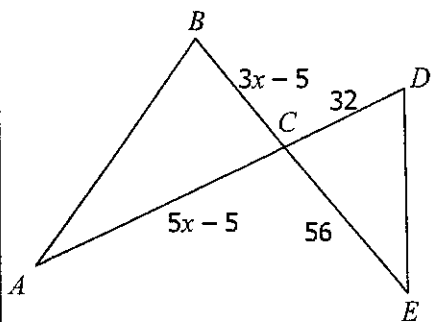
$$\frac{(5x-3)}{(3x+2)} = \frac{40}{60}$$

$$2(5x-2) = 3(3x+2)$$

$$10x-4 = 9x+6$$

$$\boxed{x = 10}$$

10. If $\triangle ABC \sim \triangle EDC$, find the value of x .



$$\frac{(3x-5)}{32} = \frac{(5x-5)}{56}$$

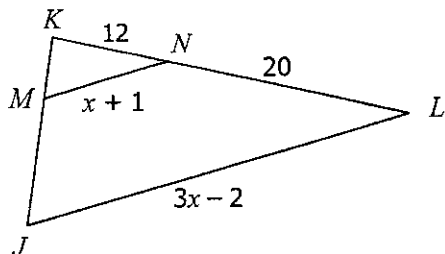
$$56(3x-5) = 32(5x-5)$$

$$168x - 280 = 160x - 160$$

$$8x = 120$$

$$\boxed{x = 15}$$

11. If $\triangle JKL \sim \triangle MKN$, find the value of x .



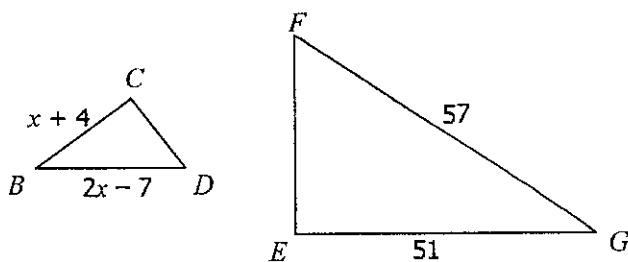
$$\frac{3}{8} = \frac{(x+1)}{(3x-2)}$$

$$3(3x-2) = 8(x+1)$$

$$9x-6 = 8x+8$$

$$\boxed{x = 14}$$

12. If $\triangle ABC \sim \triangle GEF$, find the value of x .



$$\frac{(x+4)}{51} = \frac{(2x-7)}{57}$$

$$51(2x-7) = 57(x+4)$$

$$102x - 357 = 57x + 228$$

$$45x = 585$$

$$\boxed{x = 13}$$