## Secondary Math II

7.3 Similar Polygons

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PERIOD: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Solve each proportion for the given variable.*

1. $\frac{15}{y}=\frac{40}{12}$ 2. $\frac{16}{40}=\frac{30}{x}$ 3. $\frac{y}{42.3}=\frac{144}{56.4}$

4. $\frac{126}{k}=\frac{14}{3}$ 5. $\frac{2x+1}{2}=\frac{x+2}{5} $ 6. $\frac{2}{5}=\frac{x}{21-x}$

*Is each given similarity statement true or false? Take measurements to decide if needed. EXPLAIN your answer.*

7. $ABCD\~EFGH$

B

A

C

D

G

F

H

E

G

F

H

E

B

A

C

D

8. $ABCD\~EFGH$

*State whether each of the following illustrates two similar figures. How do you know?*

9. 10.

4

8

6

B

C

A

F

EE

D

4

3

2

50◦

130◦

50◦

130◦

1

1

3

3

6

6

2

2

140◦

40◦

140◦

40◦

Assume that $∆PLU \~ ∆ABC. $ $Find AC and BC \left(label in answer\right) for each of the given lengths of AB.$

 * (not to scale)*11. $AB=1$ 12. $AB=3$

13. $AB=4 $ 14. $AB=x$

$$∆CAT\~∆DOT. Complete each statement. $$

15. ∠$C≅ $\_\_\_\_\_\_\_\_\_\_\_\_ 16. ∠$CTA≅$ \_\_\_\_\_\_\_\_\_\_\_ 17. ∠$DTO≅$ \_\_\_\_\_\_\_\_\_\_

18. ∠$A ≅ $\_\_\_\_\_\_\_\_\_\_\_\_\_ 19. ∠ $D≅$ \_\_\_\_\_\_\_\_\_\_ 20. ∠$O≅ $\_\_\_\_\_\_\_\_\_\_\_\_\_