For each multiple choice question, please circle your answer.

1. Which of the following is a dilation?

   A) $T(x, y) -----> (x-4, y+3)$ B) $T(x, y) -----> (y, x)$

   C) $T(x, y) -----> (2x, 2y)$ D) $T(x, y) -----> (5x, 3y)$

Why? _____

2. Which of the following ratios is a reduction?

   A) 1 : 3   B) 0.5 : 0.75   C) 3 : 2   D) 1 : 1.0055

How do you know? _____

3. Which of the following ratios is an enlargement?

   A) 500 : 50   B) 0.01 : 0.1   C) 7 : 3.5   D) 0.1 : 0.01
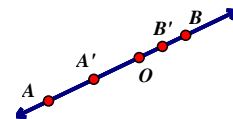
How do you know? _____

4. Determine the scale factor that appears to be used for each dilation (measured from O)

   A) 2   B) $\dfrac{1}{2}$ C) $\dfrac{1}{3}$ D) - 1
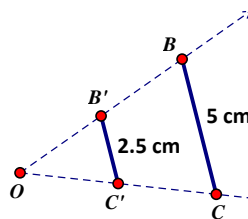
5. Determine the ratio of the given dilation?
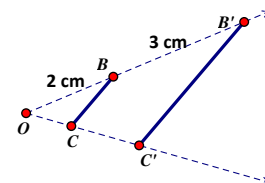
   A) 1 : 2   B) 2 : 1

   C) 2 : 5   D) 5 : 2

6. Determine the ratio of the given dilation from point O?
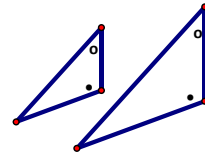
   A) 2 : 3   B) 1 : 1.5

   C) 2 : 5   D) 3 : 2

ON #7-12, if you decided the triangles are not similar, explain why.
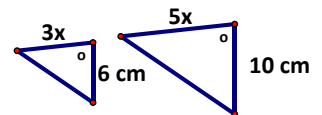
7. Which of the following would be the criterion for establishing similarity in the two triangles?

    A) AA~   B) SAS~

    C) SSS~   D) Not enough info or not similar

8. Which of the following would be the criterion for establishing similarity in the two triangles?

    A) AA~   B) SAS~

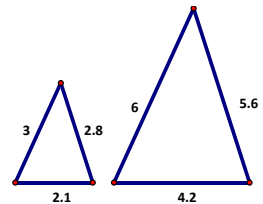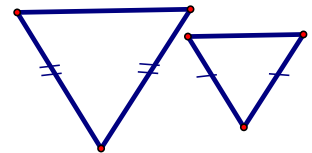   C) SSS~   D) Not enough info or not similar

9. Which of the following would be the criterion for establishing similarity in the two triangles?

    A) AA~   B) SAS~

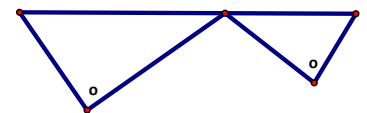   C) SSS~   D) Not enough info or not similar

10. Which of the following would be the criterion for establishing similarity in the two triangles?

    A) AA~   B) SAS~

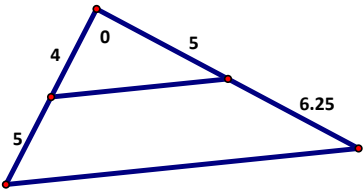   C) SSS~   D) Not enough info or not similar

11. Which of the following would be the criterion for establishing similarity in the two triangles?

    A) AA~   B) SAS~

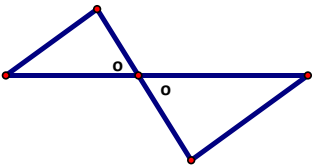   C) SSS~   D) Not enough info or not similar

12. Are the following pairs of triangles similar? If they are, then name their similarity criteria. (SSS~, SAS~, AA~)
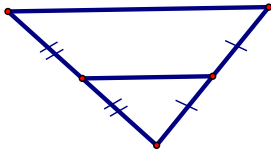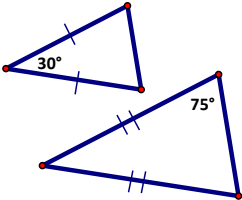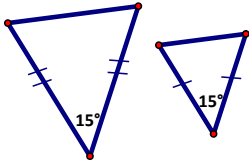
a) Yes / No _____

4   0   5

6.25

5

5

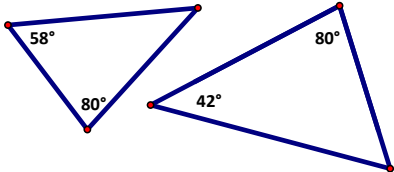b) Yes / No _____

o

o

c) Yes / No _____

d) Yes / No _____

30°

75°

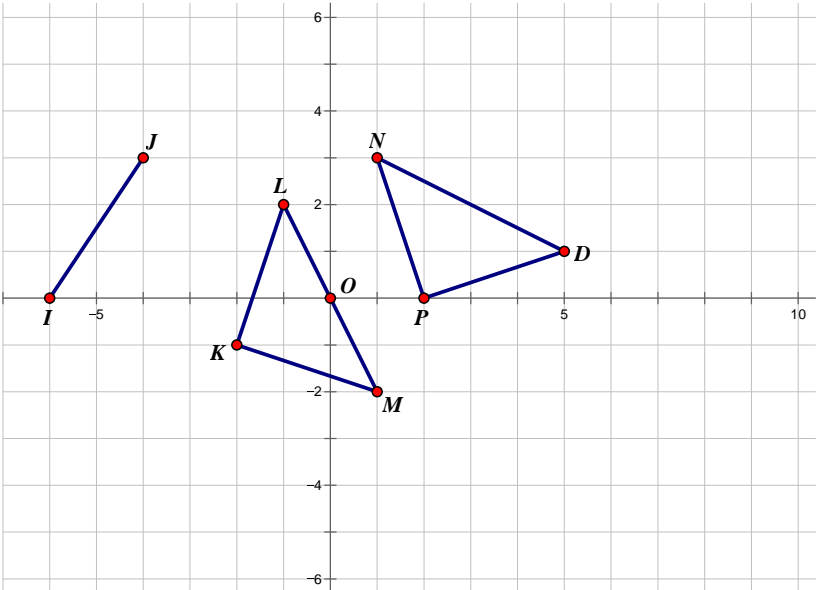e) Yes / No _____

15°

15°

f) Yes / No _____

58°

80°

80°

42°

13. Graph the following dilations:

a) $D_{O,\frac{1}{2}}(\overline{IJ})$
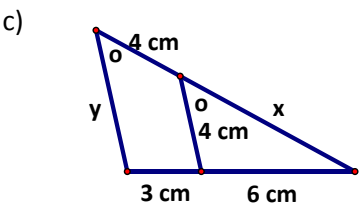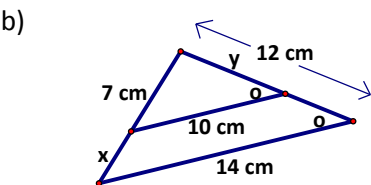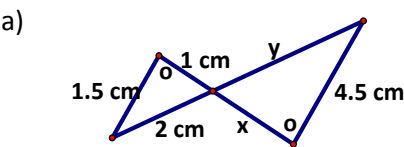
b) $D_{O,3}(\Delta LMK)$

c) $D_{O,2}(\Delta PND)$

J

N

L

D

I   −5

O

P   5   10

K

M

6

4

2

−2

−4

−6

14. Dilate the following. (O is the origin).

a) $D_{O,2}(2,-1) = (\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$ b) $D_{O,-3}(-2,4) = (\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$ c) $D_{O,-3}(\underline{\hspace{1cm}}, \underline{\hspace{1cm}}) = (12,-21)$

15. Given that $\triangle NHG \sim \triangle JKL$. Complete the following.

a) $\angle G \cong \angle \underline{\hspace{1.5cm}}$ b) $\dfrac{KL}{HG} = \dfrac{JK}{\boxed{}}$ c) $\angle J \cong \angle \underline{\hspace{1.5cm}}$ d) $\dfrac{\boxed{}}{NG} = \dfrac{KL}{HG}$

16. Write a similarity reason (SSS~ , SAS~ , AA~) for the two triangles. Then, solve for the missing information, given that the two triangles in each question are SIMILAR.

a)

b)

c)

Similarity Reason:

_____

x = _____ y = _____

Similarity Reason:

_____

x = _____ y = _____

Similarity Reason:

_____

x = _____ y = _____

17. The perimeter of a rectangle is 504 cm. If the length and the width are in a ratio of 7:2. Find the length and width.

18. Are the triangles similar? If so name the reason why and write a similarity statement.
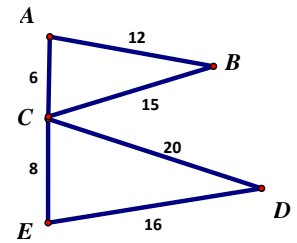
YES   or   NO   Reason: _____   Similarity Statement: _____