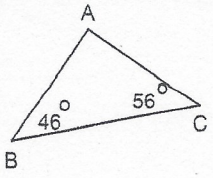
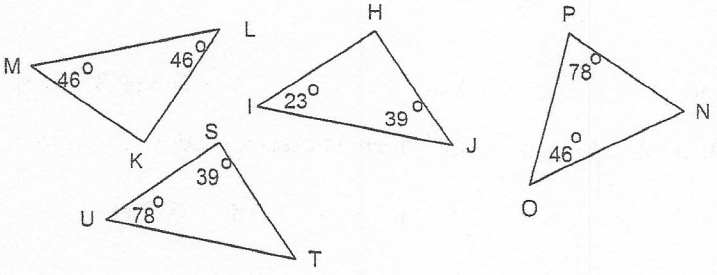
Name: _____ Class: _____ Date: _____ ID: A

Grade 9 Chapter 7.1-7.4 Quiz – Version 3

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Which triangle is similar to ΔABC?

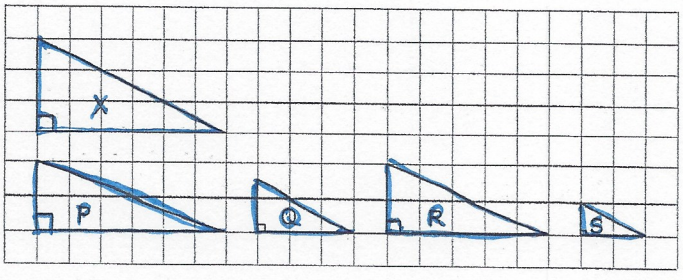




a. ΔHIJ b. ΔSTU c. ΔPON d. ΔKLM

____ 2. A square frame is projected onto a screen using an overhead projector.
The original square frame has side length 8.5 cm.
The square frame is enlarged by a scale factor of 6.2.
Determine the side length of the square frame on the screen.
a. 14.7 cm b. 52.7 cm c. 105.4 cm d. 210.8 cm

____ 3. Which of triangles P, Q, R, and S are reductions of triangle X?

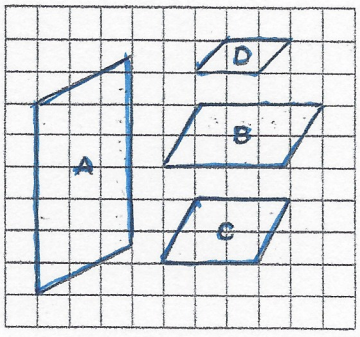


a. Triangles P, Q, and S
b. Triangles Q and S
c. Triangles P and Q
d. Triangles P, Q, and R

____ 4. A circle has diameter 56 cm. The diameter of the reduction is 7 cm. Determine the scale factor.

a. $\frac{1}{8}$ b. 8 c. $\frac{1}{49}$ d. 49

____ 5. Identify similar parallelograms.



a. All of the above b. A and B c. A and D d. D and B

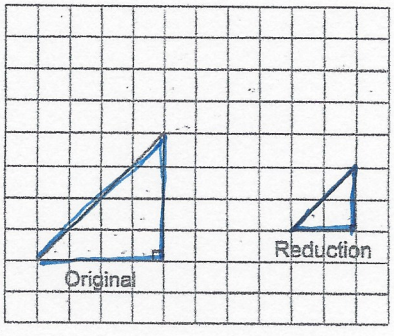
____ 6. When the shadow of a flagpole is 31.2 m long, a 1.6-m fencepost casts a shadow 2.6 m long. How tall is the flagpole?

a. 50.7 m b. 12.6 m c. 19.2 m d. 19.2 m

____ 7. Calculate the value of x in this proportion: $\frac{x}{4.5} = \frac{13.5}{18}$

a. 3.375 b. 0.6 c. 1 d. 0.75

____ 8. Determine the scale factor for this reduction.



a. 2 b. $\frac{1}{4}$ c. $\frac{1}{2}$ d. 4

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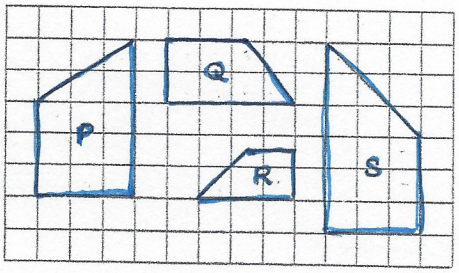
____ 9. Which two polygons have pairs of corresponding lengths that are proportional?



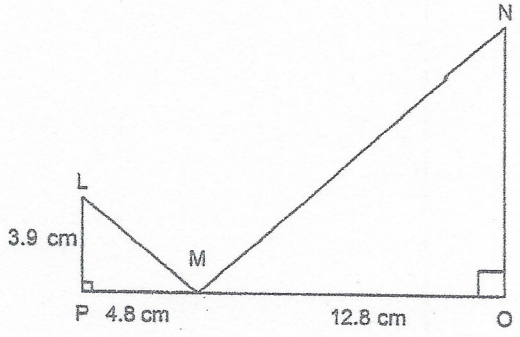
a. R and S b. P and S c. Q and R d. P and Q

____ 10. A square has side length 13.6 cm. The side length of the reduction is 3.4 cm. Determine the scale factor.

a. $\frac{5}{51}$ b. $\frac{51}{5}$ c. $\frac{1}{4}$ d. 4

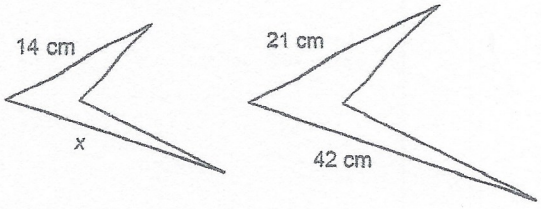
Short Answer

11. Determine the length of NO in these similar triangles.



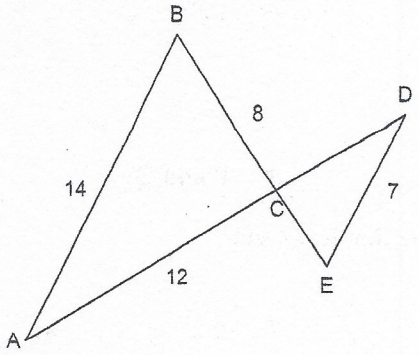
12. Rectangle ABCD is similar to rectangle PQRS.
If AB = 7.2 cm, BC = 5.7 cm, and PQ = 4.8 cm, determine the length of QR.

13. These quadrilaterals are similar. Determine the value of x.



14. A rectangular garden measures 15 m by 9 m.
A similar rectangular garden is 7.5 m long.
Calculate the width of the garden.

15. Determine the lengths of CD and CE in these similar triangles.



Problem

16. These three rectangles are similar.
a) Determine the values of x and y.
b) If you draw another similar rectangle with width 70.4 cm. What is its length?