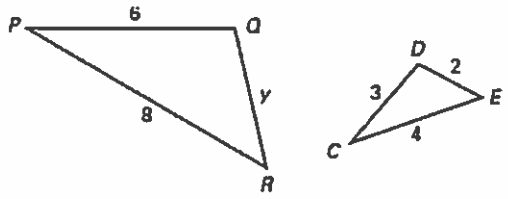
carlys

ExamView - geo and adv geo chapter 6 test.tst
05/15/15 10:54 AM

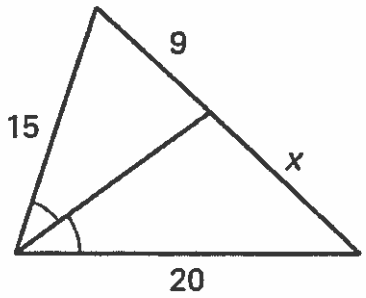
Name: _____ Class: _____ Date: _____ ID: A

Geometry and Advanced Geometry Chapter 6 Test

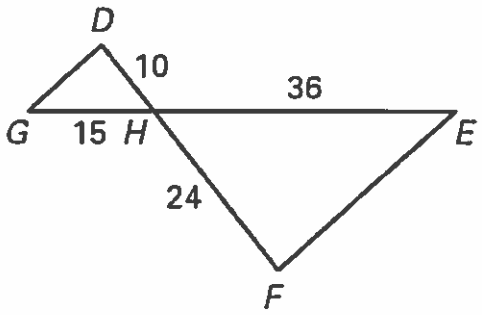
1. Given similar triangles, find the value of y.
   $\triangle PQR \sim \triangle CDE$



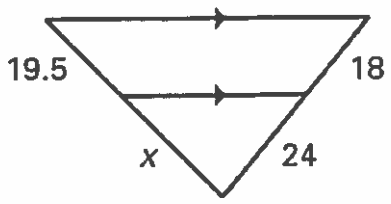
2. Find the value of x.



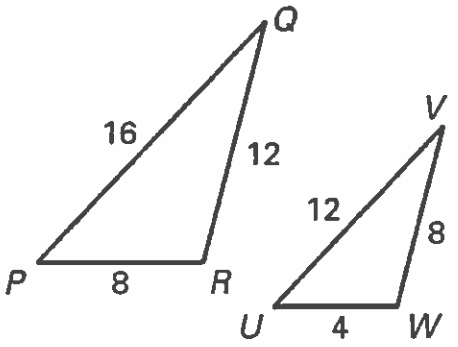
3. Determine whether the triangles are similar. If they are, write a similarity statement.



4. Find the value of x.

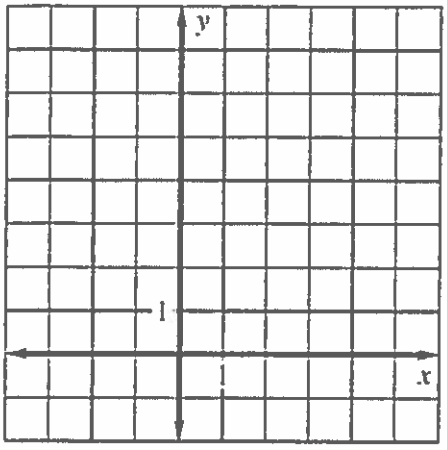


5. Determine whether the triangles are similar. If they are, write a similarity statement. If they are not, write no.



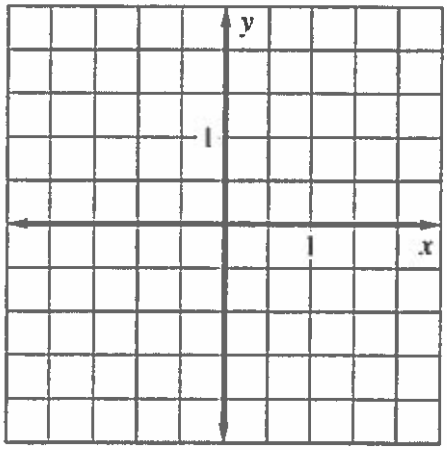
6. Draw a dilation of the polygon with the given vertices given the scale factor k. Draw the preimage and image.

$A(-1,1), B(2,1), C(1,2); k = 3$

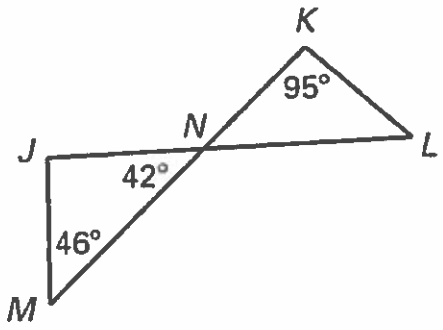


7. Draw a dilation of the polygon with the given vertices given the scale factor k. (Draw the image only. Notice the scale on the coordinate plane.)

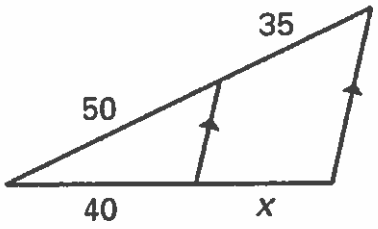
$A(-4,4), B(-4,8), C(0,4); k = \frac{1}{4}$



8. Determine whether the triangles are similar. If they are, write a similarity statement. If they are not, write no.

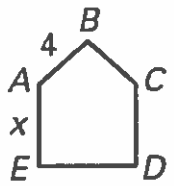


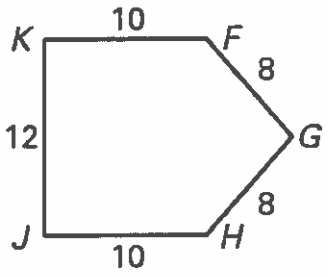
9. Find the value of x.



10. In the diagram, $ABCDE \sim FGHJK$.

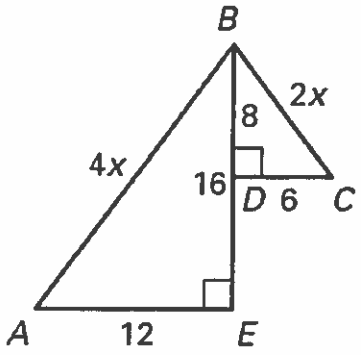
Find the perimeter of $ABCDE$.



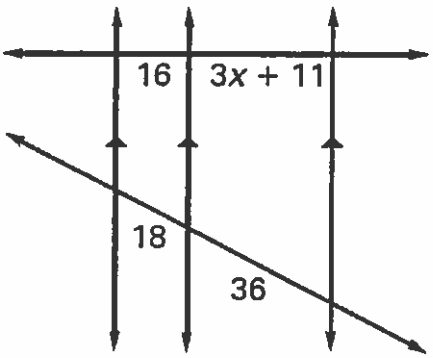


Name: _____ ID: A

11. Determine whether the triangles are similar. If they are, write a similarity statement.



12. Find the value of x.



13. Find the perimeter of polygon B given that polygon A and polygon B are similar.
The ratio of corresponding sides of polygon A to polygon B is 3:4. The perimeter of polygon A is 12 meters.

14. If two polygons are SIMILAR, then the corresponding sides must be _____.
    a. proportional
    b. congruent
    c. parallel
    d. similar

15. ΔABC and ΔXYZ are similar with $\angle A = \angle X$, and $\angle B = \angle Y$. If AB, BC, and AC are 7 inches, 9 inches, and 10 inches, respectively, and XY is 9 inches, find XZ.

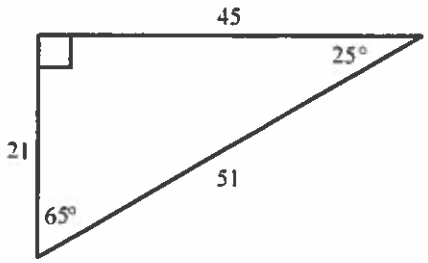
a. 7 in. b. 7.8 in. c. 11.6 in. d. 12.9 in.

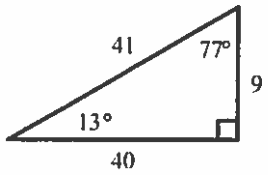
16. The perimeter of ΔPQR is 80, $PQ = 30$, $\Delta PQR \sim \Delta STU$, and $ST = 18$. What is the perimeter of ΔSTU?

a. 18.4 b. 6.8 c. 48 d. 24

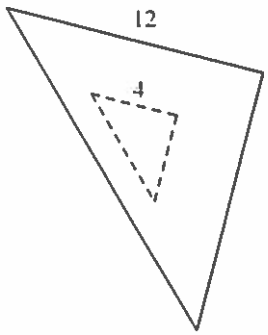
17. A rectangle has length 15 cm. Another rectangle is drawn using a scale factor of $\frac{2}{3}$. What is the length of the second rectangle?

18. Are the two triangles (not drawn to scale) similar? If so, explain why they are.





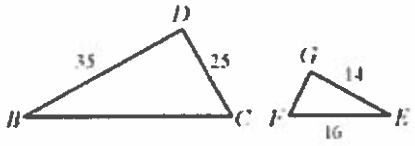
19. Describe the dilation that moves the solid figure onto the dashed figure.



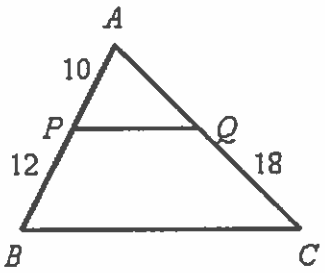
20. A building casts a shadow 174 meters long. At the same time, a pole 5 meters high casts a shadow 15 meters long. What is the height of the building?

21. In ΔJKL, $JK = 10$, $KL = 13$, and $LJ = 8$. In ΔSTR, $TR = 30$, $RS = 39$, and $ST = 24$. State whether the triangles are similar, and if so, write a similarity statement.

22. Given: $\Delta BCD \sim \Delta EFG$. Find the length of $\overline{BC}$.

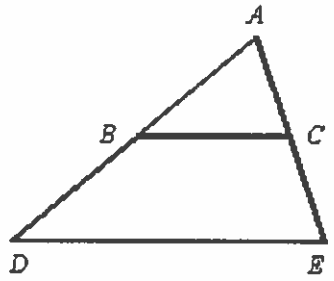


23. Given: $\overline{PQ} \parallel \overline{BC}$. Find the length of $\overline{AQ}$.

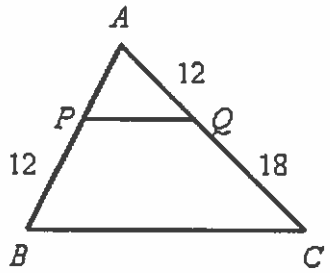


a. 17 b. 19 c. 12 d. 15

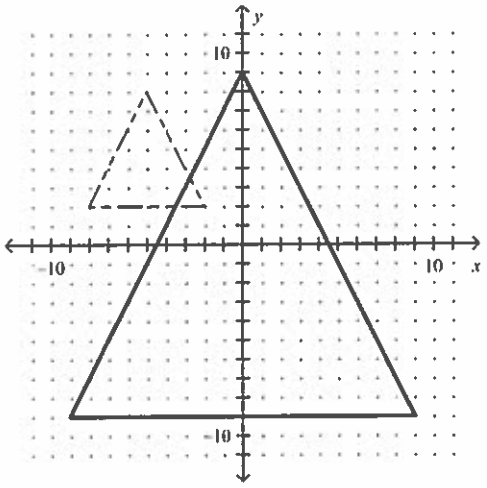
24. (Geometry class - BONUS... it's not that difficult, you can TRY it)
In the figure shown, $\overline{BC} \parallel \overline{DE}$, $AB = 2$ yards, $BC = 7$ yards, $AE = 18$ yards, and $DE = 21$ yards. Find CE.



25. Given: $\overline{PQ} \parallel \overline{BC}$. Find the length of $\overline{AB}$.



26. The dashed triangle is the image of the solid triangle for a dilation with center at the origin. What is the scale factor?



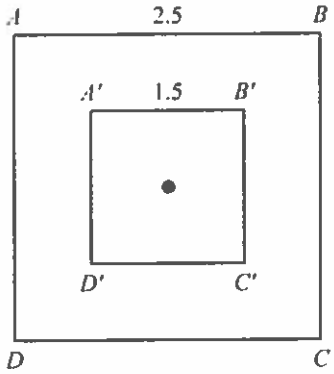
a. $\frac{2}{3}$

b. $\frac{3}{2}$

c. 3

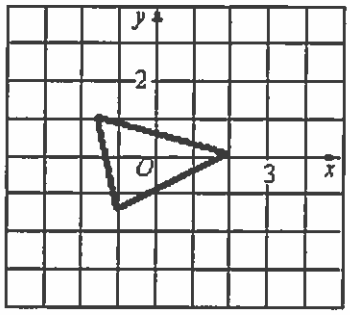
d. $\frac{1}{3}$

27. Give the scale factor for the dilation of the square shown. Preimage is ABCD, Image is A'B'C'D'.

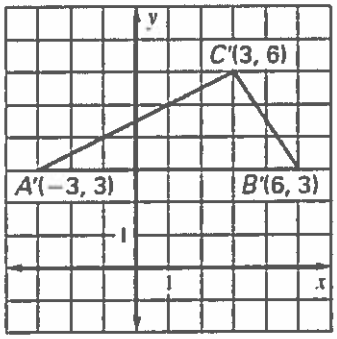


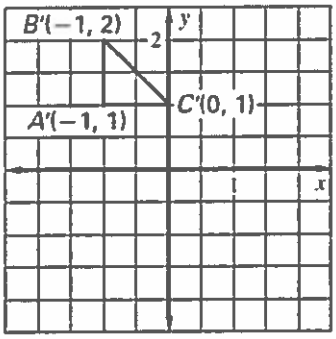
Draw the image of the given figure after a dilation with center O and the given scale factor.

28. scale factor: 2



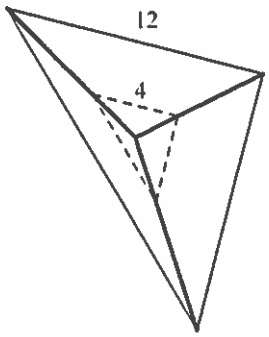
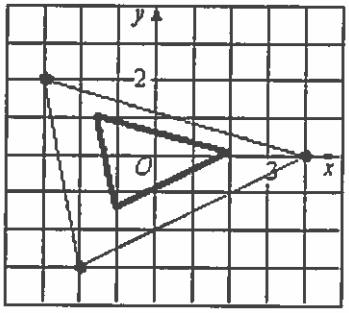
Geometry and Advanced Geometry Chapter 6 Test
Answer Section

1. 4
2. $x = 12$
3. similar; $\triangle DHG \sim \triangle FHE$
4. $x = 16$
5. not similar
6. 

7. 

8. not similar
9. $x = 28$
10. 24
11. similar; $\triangle ABE \sim \triangle CBD$
12. $x = 7$
13. 16 m
14. A
15. D
16. C
17. 10 cm
18. No.

19. This is a dilation with scale factor $\frac{1}{3}$ and center at the intersection of the heavy black line segments.



20. 58 meters
21. similar, $\Delta JKL \sim \Delta TRS$
22. 40
23. D
24. 12 yd
25. 20
26. D
27. $\frac{3}{5}$
28.