Geometry Chapter 7 Review Spring 2014

Round all decimals to the nearest hundredth unless noted otherwise.

Solve for each variable.

1. $\frac{m}{6} = \frac{20}{35}$ 2. $\frac{48}{75} = \frac{100}{Q}$ 3. $\frac{9}{c} = \frac{40}{12} = \frac{d}{85}$ 4. $\frac{x+7}{50} = \frac{x-2}{24}$

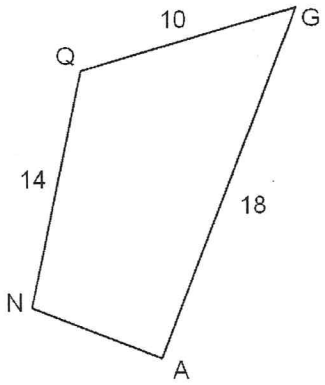
5. Use this proportion: $\frac{24}{13} = \frac{Q}{R}$ Fill in the missing parts.

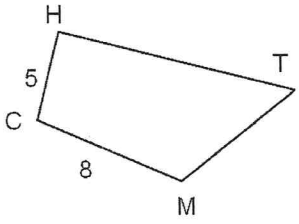
a) $\frac{\quad}{\quad} = \frac{Q}{24}$ b) $\frac{13}{24} = \frac{\quad}{\quad}$ c) $\frac{37}{13} = \frac{\quad}{\quad}$ d) $24R =$

6. The scale on a map is 4in = 125mi.
a) If two cities are 400 miles apart in real life, how far apart are they on the map?
b) If a lake is 2.5in long on the map, how long is it in real life?

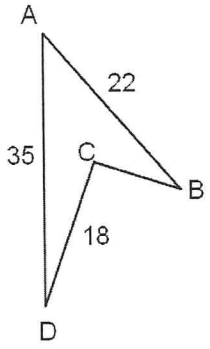
7. The scale on a drawing of a building is 4:250.
a) The building is 50 feet tall, how tall is it in the drawing. Give your answer in inches.
b) If the building in the drawing is 9 in wide, how wide is it in real life. Give your answer in feet.

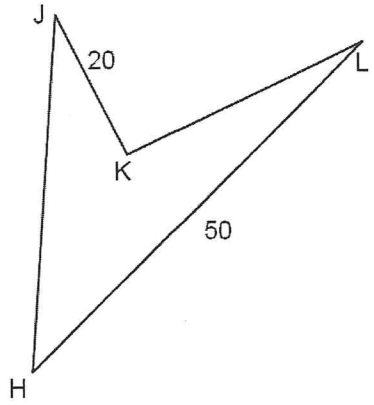
8. The figures shown are similar. State the similarity ratio and write a similarity statement.



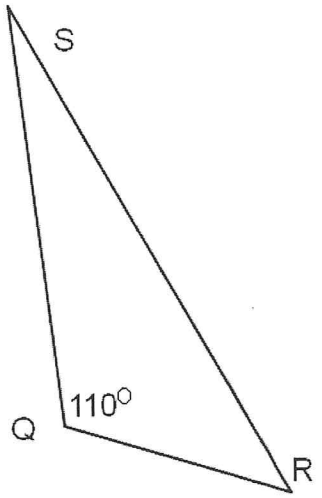


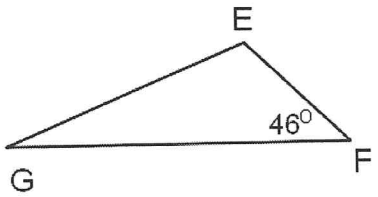
9. Given $ABCD \sim HJKL$
a) Find the length of CB
b) Find the length of JH





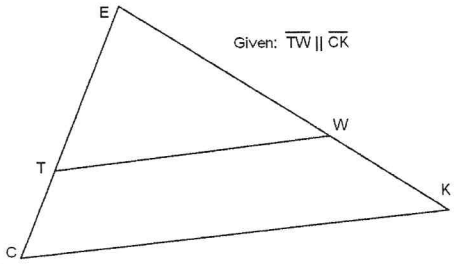
10. Given $\triangle QRS \sim \triangle EFG$ Find the measure of the missing angles.



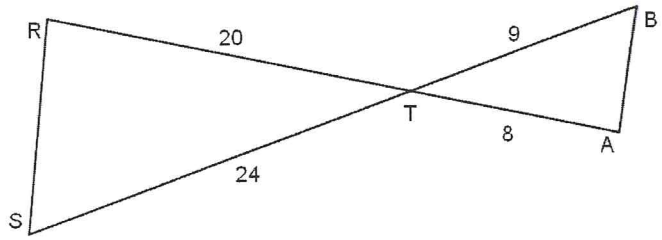


For 11 to 14, tell if each pair of triangles is similar. If yes, write a similarity statement and give a reason that they are simliar.
If no, state why.

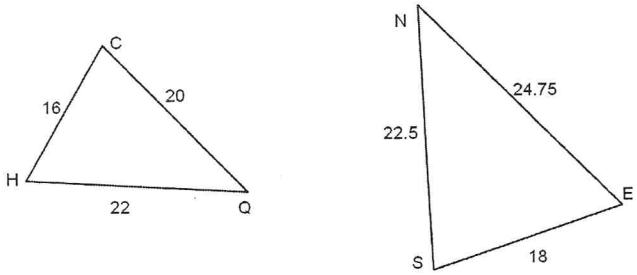
11.



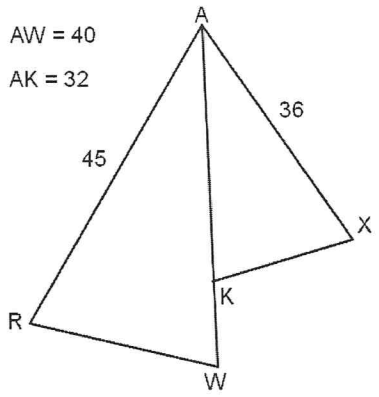
12.



13.

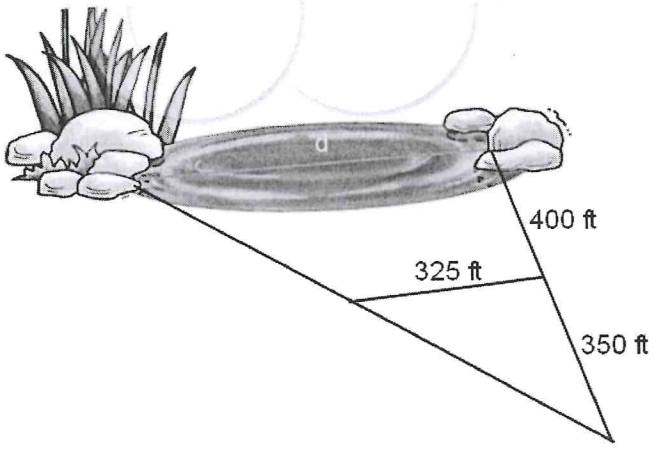


14. $\overline{AW}$ bisects $\angle RAX$

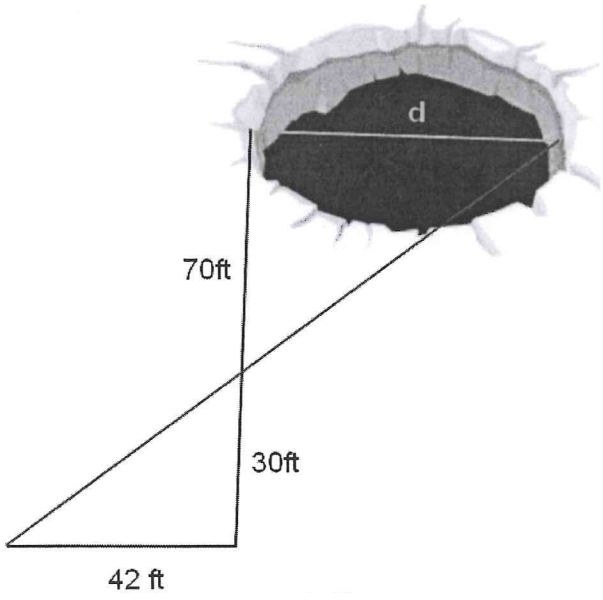


15. A 40 foot tall tree casts a 29 foot long shadow. How long of a shadow will a 17 foot tall flagpole create?

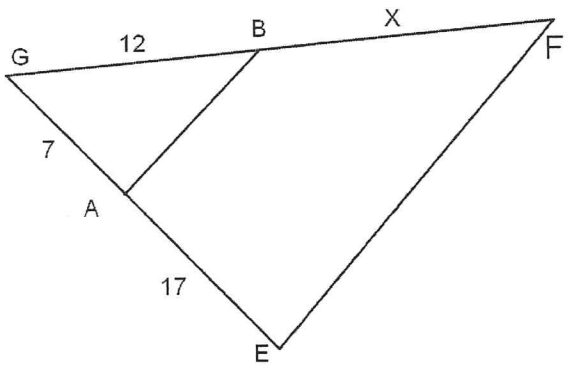
16. How far is it across the body of water.
The triangles are similar.



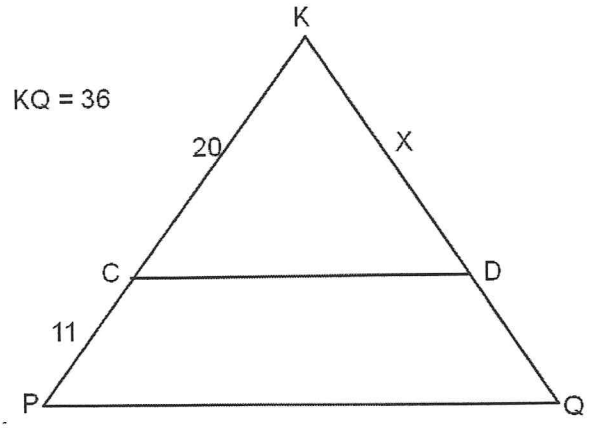
17. How far is it across the sink-hole (d)?
The triangles are similar.



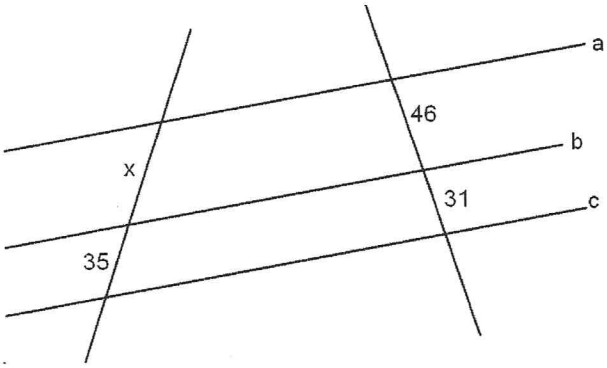
18. $\overline{AB} \| \overline{EF}$ Find the value of x.



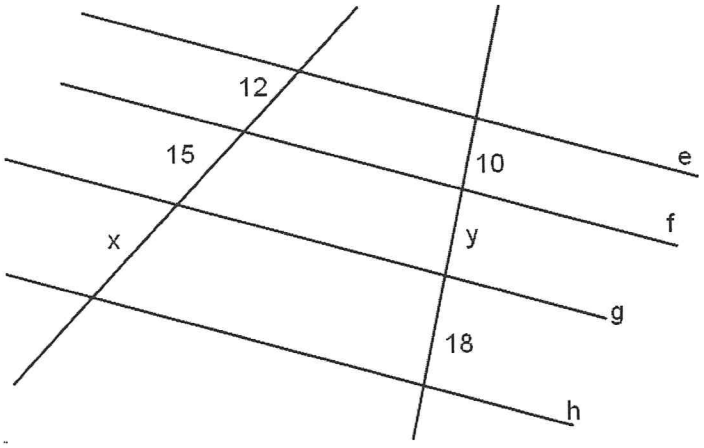
19. $\overline{CD} \| \overline{PQ}$ Find the value of x.



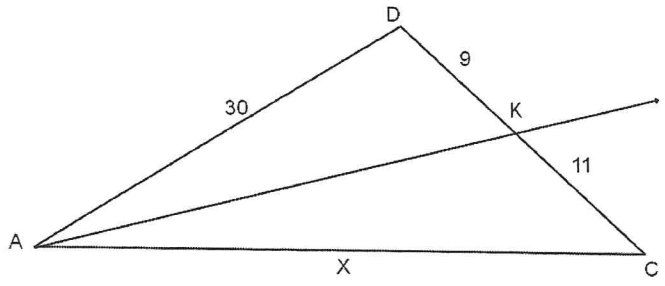
20. $a \| b \| c$ Find the value of x.



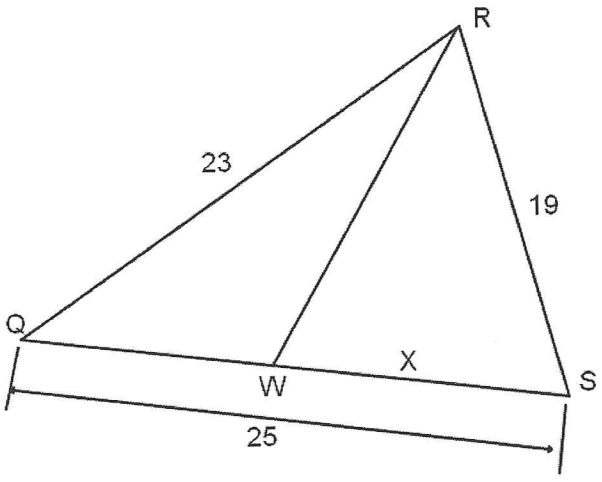
21. $e \| f \| g \| h$ Find the value of x and y



22. $\overrightarrow{AK}$ bisects $\angle CAD$ Find the value of x.



23. $\overline{RW}$ bisects $\angle QRS$ Find the value of x.



Geometry Chapter 7 Review ANSWERS Spring 2014

1. $m = 3.43$ 2. $Q = 156.25$ 3. $c = 2.7$ $d = 283.33$ 4. $x = 10.31$

5. a) $\frac{R}{13}$ b) $\frac{R}{Q}$ c) $\frac{Q+R}{R}$ d) $13Q$ 6. a) 12.8 in b) 78.13 mi

7. a) 9.6 in b) 46.88 ft

8. Similarity Ratio (reduced form) $\frac{7}{4}$ or $\frac{4}{7}$ Similarity Statement (other arrangements are possible)
$GAQN \sim THCM$

9. a) CB=14 b) JH=31.43 10. $m\angle E = 110°$ $m\angle G = 24°$ $m\angle R = 46°$ $m\angle S = 24°$

11. Yes, AA Postulate $\triangle ETW \sim \triangle ECK$ 12. No, corresponding sides are not proportional

13. Yes, SSS Theorem $\triangle CHQ \sim \triangle SEN$ 14. Yes, SAS Theorem $\triangle ARW \sim \triangle AXK$

15. 12.33 ft 16. 696.43 ft 17. 98 ft 18. $x = 29.14$

19. $x = 23.23$ 20. $x = 51.94$ 21. $x = 21.6$ $y = 12.5$

22. $x = 36.67$ 23. $x = 11.31$