

**Algebra IA: Chapter 2 Review Sheet****Short Answer**

1. Solve:  $\frac{-6}{5} = \frac{3}{n}$

3. Solve:  $\frac{4}{5n-3} = \frac{-6}{n+5}$

2. Solve:  $\frac{-5}{2p-9} = \frac{8}{9}$

4. Solve:  $\frac{x+5}{7x+8} = \frac{2}{3}$

5. Write a proportion. Then solve. Write the answer as a complete sentence.

A quality control inspector found 5 defective transistors in a shipment of 600 transistors. At this rate, how many defective transistors are there in a shipment of 1800 transistors?

6. Write a proportion. Then solve. Write the answer as a complete sentence.

A laser printer is rated by the number of pages per minute it can print. An inexpensive laser printer can print 8 pages every 7 minutes. At this rate, how long would it take to print a document 48 pages long?

7. Write a proportion. Then solve. Write the answer as a complete sentence.

Due to Earth's rotation, a point on the equator travels about 40,000 km every 24 hours. How far does a point on the equator travel in 30 hours?

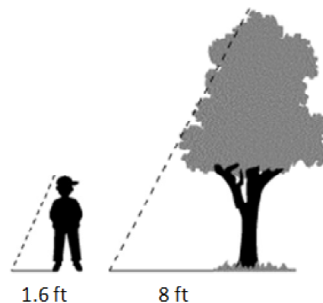
8. Write a proportion. Then solve. Write the answer as a complete sentence.

A map has a scale of 1 in.: 24 mi. Two cities are 450 miles apart. How far apart are they on the map?

9. Write a proportion. Then solve. Write the answer as a complete sentence.

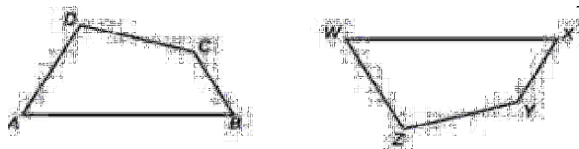
The lighting for some billboards is provided by using solar energy. If 4 small solar energy panels can generate 10 watts of power, how many panels are necessary to provide 500 watts of power?

10. A tree casts a shadow 8 ft long. A boy standing next to the tree casts a shadow 1.6 ft long. The triangle shown for the tree and its shadow is similar to the triangle shown for the boy and his shadow. If the boy is 3 ft tall, how tall is the tree?

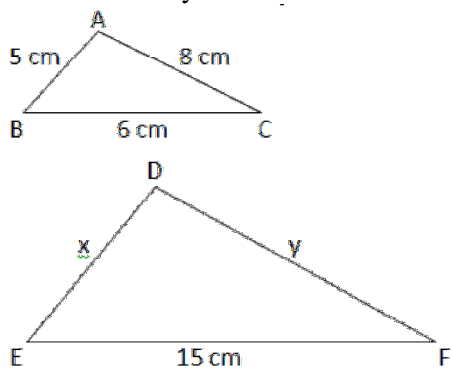


Drawing not to scale

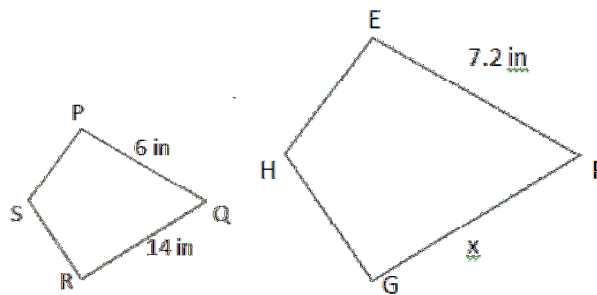
11. Quadrilateral ADCB is similar to quadrilateral WZYX. State the angle congruences and the proportionality of the sides.



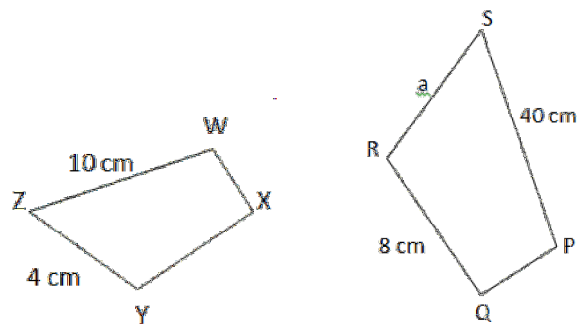
12. Triangle ABC is similar to Triangle DEF. Find the values of  $x$  and  $y$ .



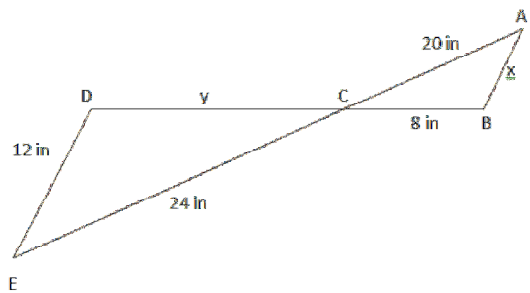
13. Quadrilateral PQRS is similar to Quadrilateral EFGH. Find the value of  $x$ .



14. Quadrilateral WXYZ is similar to Quadrilateral PQRS. Find the value of  $a$ .



15. Triangle ABC is similar to Triangle EDC. Find the values of  $x$  and  $y$ .



16. Write a problem that can be solved using similar triangles. Draw a diagram and solve the problem.