

Chapter Test

Form B

Chapter 7

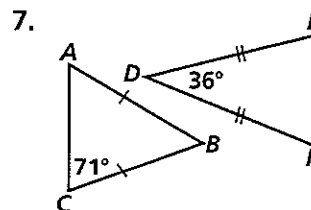
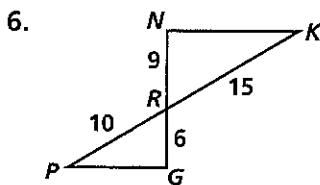
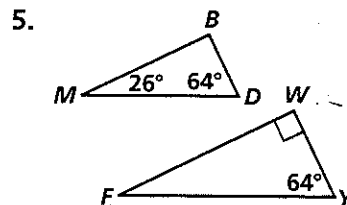
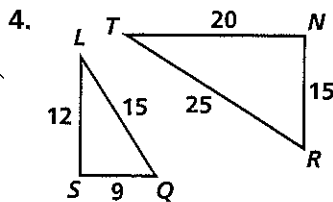
Solve each proportion.

1. $\frac{12}{x} = \frac{4}{7}$

2. $\frac{x}{10} = \frac{7}{20}$

3. $\frac{x}{x+5} = \frac{5}{7}$

Are the triangles similar? If so, write the similarity statement, and name the postulate or theorem that you can use to prove that they are similar. If not, write *not similar*.



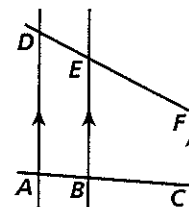
8. A person 2 m tall casts a shadow 5 m long. At the same time, a building casts a shadow 24 m long. How tall is the building?
9. Find the geometric mean of 9 and 25. If the answer is not a whole number, leave it in simplest radical form.
10. Which proportion is true for the figure to the right?

A. $\frac{AC}{DF} = \frac{DE}{AB}$

B. $\frac{BC}{AB} = \frac{EF}{DE}$

C. $\frac{AD}{BE} = \frac{BE}{CF}$

D. $\frac{AB}{EF} = \frac{DE}{EF}$



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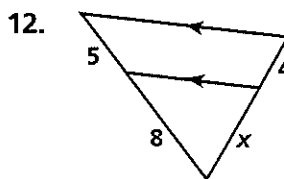
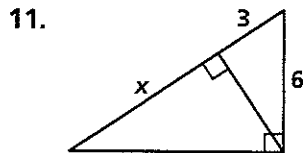
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Chapter Test (continued)

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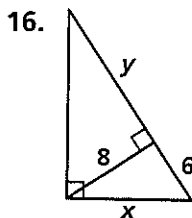
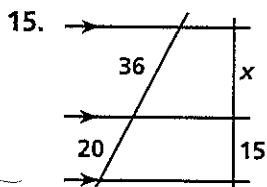
Find the value of x .



Find the similarity ratio of each pair of similar figures.

- 13. two regular hexagons with areas 180 in.^2 and 20 in.^2
- 14. two squares with areas 72 cm^2 and 162 cm^2

Find the values of the variables.



- 17. Find the length of the altitude to the hypotenuse of a right triangle whose sides have lengths 6, 8, and 10.

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