NAME _____

DATE _____

Module 16 Solving Rational Equations
Lesson 2 Solving Problems Using Direct
Variation

**guided
notes**

Lesson Objectives

• Determine whether a function is a direct variation, and identify the constant of variation.
• Solve problems using direct variation.

A direct variation involving x and y is a function in which the ratio $\frac{y}{x}$ is a

nonzero _____.

For a direct variation involving x and y, y _____ as x.

In the direct variation $\frac{y}{x} = k$, k is the _____.

1 ▶ Does y vary directly as x?

x	y
8	6
12	9
15	10

_____

2 ▶ Is this function a direct variation?

x	y
3	15
5	25
–2	–10

_____

3 ▶ Write an equation for the direct variation.

x	y
3	15
5	25
–2	–10

_____

4 The distance between cities on a map varies directly with the actual distance between the cities. The distance between two cities on a particular map is five inches. The actual distance between the cities is 65 miles. What is the actual distance between two cities that are three inches apart on the map?

_____

5 The time it takes you to hear thunder varies directly with your distance from the lightning. If you are two miles from a lightning strike, you will hear the thunder clap about ten seconds after you see the lightning. How far are you from a lightning strike if you hear the thunder clap four seconds after you see the lightning?

_____

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