DIGITAL

NAME

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

guided
practice

Set 1

1. Does *y* vary directly as *x*?

x	y
3	12
–2	–8
5	20

Yes, y varies directly as x.

2. Determine the constant of direct variation.

x	y
3	12
–2	–8
5	20

k = 4

3. Write an equation for the direct variation.

x	y
3	12
–2	–8
5	20

$\dfrac{y}{x} = 4$

4. Is this function a direct variation?

x	y
15	9
–10	–6
–16	–12

No, this function is not a direct variation.

Set 2

1. *y* varies directly as *x*.
   y is –5 when *x* is 15.
   Find *y* when *x* is 24.

   y = –8 when x = 24.

2. On a scale drawing, a sidewalk 90 meters long is represented by a line segment six centimeters long. Find the length of a sidewalk represented by a line segment eight centimeters long.

   The sidewalk is 120 meters long.

3. The electrical resistance of a wire varies directly as the wire's length. If a wire 220 cm long has resistance of 15 ohms, what length wire *x* has a resistance of 18 ohms?

   A wire with a resistance of 18 ohms has a length of 264 centimeters.