REVIEW: Multiplying and Dividing Integers
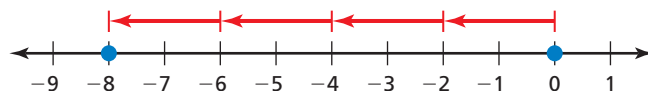
Name _____

Key Concept and Vocabulary

factors   product

$8 \cdot (-5) = -40$

$-12 \div (-3) = 4$

dividend   divisor   quotient

Multiply and divide.
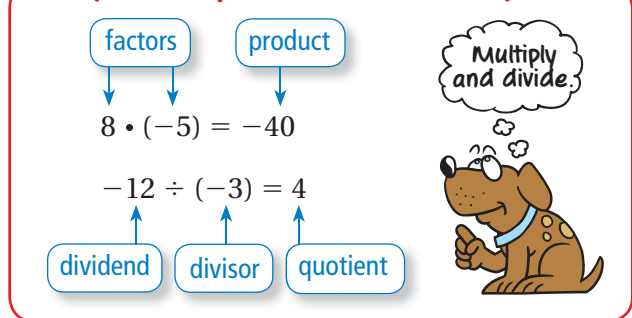
Visual Model

$$4 \cdot (-2) = (-2) + (-2) + (-2) + (-2)$$

Skill Examples

1. $-3 \cdot (-4) = 12$ ← same sign, product and quotient positive

2. $-36 \div (-6) = 6$ ←

3. $-7 \cdot 0 = 0$

4. $-10 \div 5 = -2$ ← different signs, product and quotient negative

5. $-5 \cdot 6 = -30$ ←

Application Example

6. Each of your six friends owes you $5. Use integer multiplication to represent the total amount your friends owe you.

$$6 \cdot (-5) = -30$$

The total amount owed is $30.

PRACTICE MAKES *PURR*-FECT™

Check your answers at BigIdeasMath.com.

Find the product or quotient.

7. $-3 \times (-5) = \underline{15}$ **8.** $7(-3) = \underline{-21}$ **9.** $0 \cdot (-5) = \underline{0}$ **10.** $(-5)(-7) = \underline{35}$

11. $-8 \cdot 2 = \underline{-16}$ **12.** $(-5)^2 = \underline{25}$ **13.** $(-3)^3 = \underline{-27}$ **14.** $4(-2)(-3) = \underline{24}$

15. $-16 \div 4 = \underline{-4}$ **16.** $-20 \div (-5) = \underline{4}$ **17.** $\dfrac{-9}{3} = \underline{-3}$ **18.** $\dfrac{-20}{-10} = \underline{2}$

Complete the multiplication or division equation.

19. $-15 \div \underline{5} = -3$ **20.** $45 \div \underline{(-9)} = -5$ **21.** $\underline{-100} \div (-20) = 5$

22. $8 \cdot \underline{(-8)} = -64$ **23.** $\underline{-3} \cdot (-9) = 27$ **24.** $-12 \cdot \underline{8} = -96$

25. **TOTAL OWED** Each of your eight friends owes you $10. Use integer multiplication to represent the total amount your friends owe you. $\underline{8 \cdot (-10) = -80;}$
$\underline{\text{The total amount owed is \$80.}}$

26. **TEMPERATURE** The low temperatures for a week in Edmonton, Alberta are $-15°C$, $-12°C$, $-10°C$, $-12°C$, $-18°C$, $-20°C$, and $-25°C$. What is the mean low temperature for the week? Show your work.

$\underline{-16°C;\ [-15 + (-12) + (-10) + (-12) + (-18) + (-20) + (-25)] \div 7}$

$\underline{= -112 \div 7 = -16}$

Topic 4.4