MATH 6

MULTIPLYING AND DIVIDING INTEGERS

GOAL Multiply and divide integers.

MULTIPLYING AND DIVIDING INTEGERS

The product (or quotient) of two integers with the *same* sign is *positive*.

The product (or quotient) of two integers with *different* signs is *negative*.

The product of any integer and 0 is 0.

The quotient of 0 and any nonzero integer is 0.

EXAMPLE 1 **Multiplying Integers**

    a. $-5(-10) = 50$ Same sign: Product is positive.

    b. $-9(9) = -81$ Different signs: Product is negative.

    c. $-18(0) = 0$ The product of any integer and 0 is 0.

EXAMPLE 3 **Dividing Integers**

    a. $-63 \div (-9) = 7$ Same sign: Quotient is positive.

    b. $144 \div (-12) = -12$ Different signs: Quotient is negative.

    c. $0 \div (-8) = 0$ The quotient of 0 and any nonzero integer is 0.

Exercises for Examples 1–3

Find the product or quotient.

1. $18(3)$ **2.** $78 \div (-6)$ **3.** $-66 \div (-22)$

4. $-8(-11)$ **5.** $\dfrac{-240}{12}$ **6.** $9(-15)$

Classwork

Tell whether the product or quotient is *positive* or *negative*. You do not need to find the product or quotient.

1. $16(-23)$ **2.** $\dfrac{-72}{9}$ **3.** $-26(-17) \div 13$

Find the product or quotient.

4. $25(-5)$

5. $-29(-4)$

6. $-124 \div 31$

7. $98 \div (-14)$

8. $\dfrac{-102}{-17}$

9. $-32(9)$

10. $-42(-6)$

11. $201 \div (-67)$

12. $-612 \div (-18)$

13. $\dfrac{252}{-4}$

14. $-19(7)$

15. $-21(-11)$