11.5 Dividing Integers

ESSENTIAL QUESTION: Is the quotient of 2 integers positive, negative, or zero?

The quotient of two integers with the same sign is positive.

The quotient of two integers with different signs is negative.

$-18 \div (-6) =$ 3

$75 \div (-25) =$ -3

$\frac{-54}{6} =$ -9

$-48 \div (-4) =$ 12

$-39 \div (-3) =$ 13

$\frac{-84}{-4} =$ 21

$-18 \div 2 =$ -9

$-32 \div (-4) =$ 8

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

$0 \div (-10) =$ 0

$\frac{-49}{7} =$ -7

$\frac{-21}{3} =$ -7

Evaluate the expression.

$10 - x^2 \div y$ *when* $x = 8$ *and* $y = -4$

$10 - 8^2 \div -4$

$10 - 64 \div -4$

$10 + 16 = 26$

$a \div b$ *when* $a = -18$ *and* $b = -6$

$-18 \div -6 = 3$

$\frac{a+6}{3}$ *when* $a = -18$ *and* $b = -6$

$\frac{-18 + 6}{3} = \frac{-12}{3}$

-4

$\frac{b^2}{a} + 4$ *when* $a = -18$ *and* $b = -6$

$\frac{(-6)^2}{-18} + 4$

$\frac{36}{-18} + 4$

$-2 + 4 = -2$

$\frac{x-8}{y^2}$ *when* $x = 4$ *and* $y = 2$

$\frac{4-8}{2^2} = \frac{-4}{4} = -1$