DIGITAL

NAME _____

DATE _____

Module 1   Getting Ready for Algebra
Lesson 2   Simplifying Expressions with Integers

guided notes

Lesson Objectives

- Add two or more integers.
- Subtract integers.
- Multiply two or more integers.
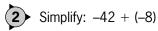- Divide integers.

If the signs of the integers are the same:

- _____ the absolute values of the integers.

- Give the sum the same sign as the integers.

If the signs of the integers are different:

- _____ the absolute values of

  the integers.

- Give the sum the same sign as the integer with the

  _____ absolute value.

1 ▶ Simplify: 10 + (–3)

_____

2 ▶ Simplify: –42 + (–8)

_____

3 ▶ Simplify: –15 + 7

_____

4 ▶ Simplify: 12 + (–6) + 1 + (–7)

_____

Rule for Subtracting Integers

- Rewrite all integer subtraction problems as equivalent

  _____ problems.

- Remember that subtracting is the same as adding

  the _____ .

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5▶ Simplify: $-3 - 9$

6▶ Simplify: $25 - 40$

_____

_____

7▶ Simplify: $12 - (-12)$

8▶ Simplify: $-6 - (-18)$

_____

_____

Rules

positive · positive = positive

positive · negative = negative

negative · positive = negative

negative · negative = positive

Rule for Multiplying Two Integers

• Multiply as if both factors are positive.

• If both factors have the same sign, the product is _____.

• If the factors have different signs, the product is _____.

9▶ Simplify: $(-9)(11)$

10▶ Simplify: $(-4)(-2)$

_____

_____

11▶ Simplify: $(-10)(-6)(-2)$

12▶ Simplify: $(5)(0)(-18)$

_____

_____

Rule for Dividing Two Integers

• Divide the absolute values.

• If both integers have the same sign, the quotient is _____.

• If the integers have different signs, the quotient is _____.

For any non-zero number a, $\frac{0}{a} = 0$.

For any number a, $\frac{a}{0}$ is _____.

13▶ Simplify: $\frac{-25}{-5}$

14▶ Simplify: $-81 \div 9$

_____

_____

15▶ Simplify: $\frac{160}{0}$

_____