Use these rules to add and subtract integers.

Adding Integers

Same Sign

- The sum of two positive integers is positive.
  Example: $6 + 16 = 22$
- The sum of two negative integers is negative.
  Example: $-9 + (-3) = -12$

Different Signs

- First find the absolute values of each number.
- Then subtract the lesser absolute value from the greater.
- The sum has the sign of the integer with the greater absolute value.
  Example: $-10 + 9 = -1$

Subtracting Integers

- To subtract integers, add the opposite.
- Then following the rules for adding integers.
  Example: $6 - (-3) = 6 + 3 = 9$

To multiply integers:

- If the signs are alike, the product is positive.

$$2 \cdot 3 = 6$$
$$-2 \cdot -3 = 6$$

- If the signs are different, the product is negative.

$$2 \cdot -3 = -6$$
$$-2 \cdot 3 = -6$$

To divide integers:

- If the signs are alike, the quotient is positive.

$$6 \div 3 = 2$$
$$-6 \div -3 = 2$$

- If the signs are different, the quotient is negative.

$$6 \div -3 = -2$$
$$-6 \div 3 = -2$$

Name _____ Class _____ Date _____

Practice 1-2

Adding and Subtracting Integers

Use a number line to find each sum.

1. $8 + (-4)$ _____
2. $2 + (-3)$ _____
3. $7 - 6$ _____
4. $(-4) + (-8)$ _____
5. $3 + (-2)$ _____
6. $15 + (-8)$ _____

Find each sum.

7. $-2 + (-3)$ _____
8. $8 - 7 + 4$ _____
9. $8 + (-5)$ _____
10. $15 + (-3)$ _____
11. $-16 + 8$ _____
12. $7 + (-10)$ _____
13. $-9 + (-5)$ _____
14. $-12 + 14$ _____

Find each difference.

15. $9 - 26$ _____
16. $-4 - 15$ _____
17. $21 - (-7)$ _____
18. $27 - (-16)$ _____
19. $-16 - (-43)$ _____
20. $47 - 19$ _____
21. $-156 - 98$ _____
22. $-192 - 47$ _____
23. $0 - (-51)$ _____
24. $-63 - 89$ _____
25. $-12 - (-21)$ _____
26. $92 - (-16)$ _____

Use >, <, or = to complete each statement.

27. $-9 - (-11) \square 0$
28. $-17 + 20 \square 0$
29. $11 - (-4) \square 0$
30. $28 - 19 \square 0$
31. $52 + (-65) \square 0$
32. $-28 - (-28) \square 0$

Solve.

33. The highest and lowest temperatures ever recorded in Africa are 136°F and −11°F. The highest temperature was recorded in Libya, and the lowest temperature was recorded in Morocco. What is the difference in these temperature extremes?

_____

34. The highest and lowest temperatures ever recorded in South America are 120°F and −27°F. Both the highest and lowest temperatures were recorded in Argentina. What is the difference in these temperature extremes?

_____

© Pearson Education, Inc., publishing as Pearson Prentice Hall. All rights reserved.

Name _____ Class _____ Date _____

Activity Lab 1-3

Multiplying and Dividing Integers

Multiplication Madness

Look at patterns of integer multiplication:

1. $6 \times -18 =$ _____
2. $(-2 \times 5) \times 3 =$ _____
3. $(4 \times -6) \times 7 =$ _____
4. $(8 \times 9)(2 \times -1) =$ _____
5. Each problem above has _____ negative factor(s).
6. Each product is _____.
7. $-17 \times -3 =$ _____
8. $(-6 \times 5) \times -8 =$ _____
9. $(9 \times -2)(-3 \times 1) =$ _____
10. $(-4 \times -7)(2 \times 2) =$ _____
11. Each problem above has _____ negative factor(s).
12. Each product is _____.
13. $(-5 \times -4) \times -7 =$ _____
14. $-3 \times (-8 \times -2) =$ _____
15. $(-3 \times -4)(-2 \times 8) =$ _____
16. $(-10 \times 1)(-7 \times -1) =$ _____
17. Each problem above has _____ negative factor(s).
18. Each product is _____.
19. $(-3 \times -5)(-2 \times -2) =$ _____
20. $(-9 \times -1)(-4 \times -3) =$ _____
21. $(-6 \times -1)(-4 \times -11) =$ _____
22. $(-20 \times -5)(-3 \times -6) =$ _____
23. Each problem above has _____ negative factor(s).
24. Each product is _____.
25. Draw a conclusion about the product of postive and negative integers.

_____

_____