

Subtracting Integers

Here is a rule for subtracting integers:

Add the opposite of the second number to the first number.

$$6 - (-8) = ?$$

The second number is -8 .
The opposite of -8 is 8 .
Add this number, 8 , to the
first number, 6 .

$$6 + 8 = 14$$

$$\text{So, } 6 - (-8) = 14.$$

$$-9 - 2 = ?$$

The second number is 2 .
The opposite of 2 is -2 .
Add this number, -2 , to
the first number, -9 .

$$-9 + (-2) = -11$$

$$\text{So, } -9 - 2 = -11.$$

$$-5 - 4 = ?$$

The second number is 4 .
The opposite of 4 is -4 .
Add this number, -4 , to
the first number, -5 .

$$-5 + (-4) = -9$$

$$\text{So, } -5 - 4 = -9.$$

Find each difference.

1. $10 - 12 =$ _____

2. $-3 - 2 =$ _____

3. $8 - (-4) =$ _____

4. $-3 - (-9) =$ _____

5. $15 - (-9) =$ _____

6. $-8 - 7 =$ _____

7. $-30 - 22 =$ _____

8. $45 - (-3) =$ _____

9. **Number Sense** Without computing, how do you know that the answer to $7 - (-15)$ is positive?

Subtracting Integers

Draw a number line or use the rules for subtracting integers to find each difference.

1. $-14 - (-14) =$ _____ 2. $-9 - 10 =$ _____
 3. $-15 - (-18) =$ _____ 4. $-3 - (-12) =$ _____
 5. $-5 - (-4) =$ _____ 6. $-7 - 2 =$ _____

Algebra Evaluate each expression for $t = -9$.

7. $64 - t =$ _____ 8. $t - (-7) =$ _____ 9. $4 - t - 10 =$ _____

In football, the number of yards a team carries the ball is sometimes a negative number. The table shows the number of yards the Panthers and Wildcats carried the ball in a game.

Total Yards

| Team | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|----------|-------------|-------------|-------------|-------------|
| Panthers | 30 | 15 | -8 | -25 |
| Wildcats | -2 | -10 | 102 | 27 |

10. What is the difference between the greatest and least number of yards the Panthers carried the ball? _____
11. How many more yards did the Wildcats carry the ball in the 4th quarter than the Panthers?

Test Prep

12. Which is the value of t if $t - (-10) = -8$?
 A. -18 B. -2 C. 2 D. 18
13. **Writing in Math** Explain how you would solve $-8 - (-6)$ using a number line.

