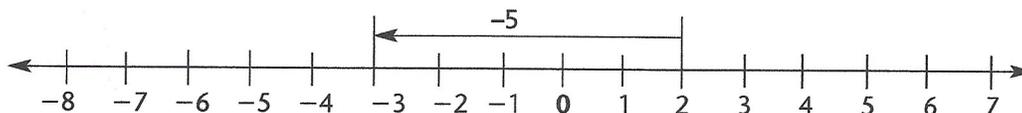


Adding Integers

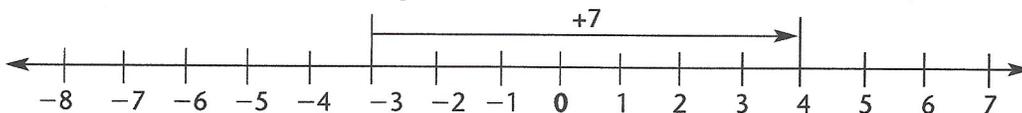
EXAMPLE Add $2 + (-5)$.

Start at 2, move 5 units to the *left*. The answer is -3 .



Add $-3 + 7$.

Start at -3 , move 7 units to the *right*. The answer is 4.



Directions Answer the questions.

- To add a *negative* number, in which direction do you count on the number line? _____
- To add a *positive* number, in which direction do you count on the number line? _____

Directions Write each sum on the blank.

- | | | | |
|------------------|-------|-----------------|-------|
| 3. $-4 + 4$ | _____ | 12. $-2 + (-4)$ | _____ |
| 4. $1 + (-7)$ | _____ | 13. $-6 + 6$ | _____ |
| 5. $1 + 5$ | _____ | 14. $6 + (-6)$ | _____ |
| 6. $0 + 6$ | _____ | 15. $-4 + 8$ | _____ |
| 7. $-1 + (-5)$ | _____ | 16. $-6 + 12$ | _____ |
| 8. $5 + (-11)$ | _____ | 17. $-2 + 6$ | _____ |
| 9. $-5 + 3$ | _____ | 18. $-3 + 9$ | _____ |
| 10. $-6 + 3$ | _____ | 19. $7 + 7$ | _____ |
| 11. $11 + (-12)$ | _____ | 20. $2 + (-8)$ | _____ |

Subtracting Integers

EXAMPLEFind the difference: $14 - (-15)$ **Rule** To subtract in algebra, add the opposite.15 is the opposite of -15 .

$$14 + 15 = 29$$

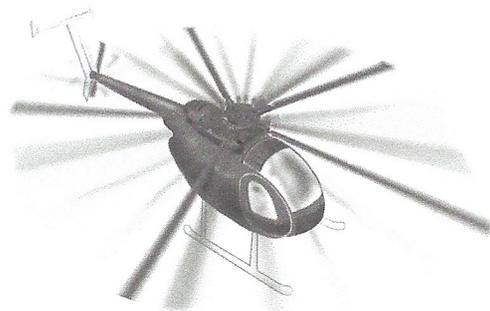
Directions Rewrite each expression as addition. Solve the new expression.

- | | | | |
|-----------------|-------|-----------------|-------|
| 1. $-4 - (-11)$ | _____ | 10. $-5 - (-5)$ | _____ |
| 2. $9 - (+3)$ | _____ | 11. $2 - (+9)$ | _____ |
| 3. $-1 - 13$ | _____ | 12. $1 - (+4)$ | _____ |
| 4. $-6 - (+10)$ | _____ | 13. $6 - 8$ | _____ |
| 5. $7 - (-10)$ | _____ | 14. $-8 - (-3)$ | _____ |
| 6. $4 - (+4)$ | _____ | 15. $-3 - (+7)$ | _____ |
| 7. $2 - (+8)$ | _____ | 16. $8 - (-7)$ | _____ |
| 8. $-11 - (-1)$ | _____ | 17. $10 - (+5)$ | _____ |
| 9. $6 - (+2)$ | _____ | 18. $5 - 6$ | _____ |

Directions Solve these problems. Write an expression and the answer.

19. Dara's kite is flying 67 feet high. Jill's is flying 40 feet high. What is the difference between the heights of these two kites?

20. A helicopter hovers 60 m above the ocean's surface. A submarine is resting 30 m underwater, directly below the helicopter. What is the difference between the positions of these two objects?



Multiplying Integers

Directions Find and write each difference.

1. $-2 - (+9)$ _____

2. $5 - (+2)$ _____

3. $19 - 5$ _____

4. $-11 - (-3)$ _____

5. $8 - (+7)$ _____

6. $-6 - 16$ _____

7. $6 - (+2)$ _____

8. $20 - (-11)$ _____

9. $-4 - (+8)$ _____

10. $7 - (-2)$ _____

11. $-1 - (+7)$ _____

12. $23 - 13$ _____

13. $-3 - (+4)$ _____

14. $-9 - (+10)$ _____

Directions Find and write each product.

15. $(-14)(1)$ _____

16. $(6)(0)$ _____

17. $(-7)(6)$ _____

18. $(5)(-9)$ _____

19. $(3)(13)$ _____

20. $(-7)(-7)$ _____

21. $(-5)(-3)$ _____

22. $(0)(-44)$ _____

23. $(-8)(2)$ _____

24. $(-1)(-18)$ _____

25. $(3)(-11)$ _____

26. $(-4)(-10)$ _____

27. $(7)(4)$ _____

28. $(12)(-3)$ _____

Directions Solve these problems.

29. One computer in Mrs. Wu's classroom has a connection to the Internet. Using this computer, each student can spend 5 minutes visiting Web sites. If the class has 10 students, how long (in minutes) is the Internet connection in use?
- _____

30. When Dee's pool is drained, she can see 3 depth marks below the water line. Each mark is labeled -3 to represent 3 feet under water. Write an expression to show how Dee can calculate the pool's depth.
- _____

Dividing Positive and Negative Integers

EXAMPLE

Notice the possible combinations for dividing positive and negative integers.

$$\text{positive} \div \text{positive} = \text{positive} \quad 6 \div 2 = 3$$

$$\text{positive} \div \text{negative} = \text{negative} \quad 6 \div -2 = -3$$

$$\text{negative} \div \text{positive} = \text{negative} \quad -6 \div 2 = -3$$

$$\text{negative} \div \text{negative} = \text{positive} \quad -6 \div -2 = 3$$

Dividing 0 by any integer, positive or negative, produces 0 as the quotient.

Directions Tell whether the quotient is *positive*, *negative*, or *zero*.

1. $16 \div -4$ _____

9. $-27 \div 3$ _____

2. $-63 \div -9$ _____

10. $0 \div -4$ _____

3. $-10 \div 2$ _____

11. $-81 \div -9$ _____

4. $33 \div 11$ _____

12. $19 \div -1$ _____

5. $-12 \div 4$ _____

13. $56 \div 8$ _____

6. $100 \div 10$ _____

14. $500 \div 5$ _____

7. $36 \div -9$ _____

15. $32 \div -8$ _____

8. $15 \div -5$ _____

Directions Find and write each quotient.

16. $36 \div 12$ _____

24. $-50 \div 10$ _____

17. $21 \div -7$ _____

25. $27 \div -9$ _____

18. $18 \div -3$ _____

26. $-14 \div 2$ _____

19. $-35 \div 7$ _____

27. $0 \div 16$ _____

20. $-24 \div 2$ _____

28. $-72 \div -9$ _____

21. $-16 \div -8$ _____

29. $-1 \div -1$ _____

22. $45 \div -9$ _____

30. $9 \div 3$ _____

23. $-200 \div -200$ _____