

Lesson 2 Add Integers

To add integers with the same sign, add their absolute values. The sum is:

- positive if both integers are positive.
- negative if both integers are negative.

To add integers with different signs, subtract their absolute values. The sum is:

- positive if the positive integer's absolute value is greater.
- negative if the negative integer's absolute value is greater.

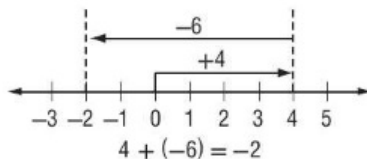
To add integers, it is helpful to use a number line.

Example 1

Find $4 + (-6)$.

Use a number line.

- Start at 0.
- Move 4 units right.
- Then move 6 units left.

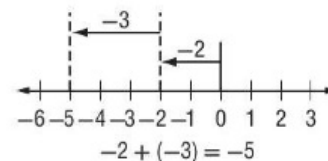


Example 2

Find $-2 + (-3)$.

Use a number line.

- Start at 0.
- Move 2 units left.
- Move another 3 units left.



Exercises

Add.

1. $-5 + (-2) = -7$

⊖⊖⊖⊖⊖
⊕⊕ NO ZERO PAIRS
COMBINE

2. $8 + 1$

3. $-7 + 10 = 3$

⊖⊖⊖⊖⊖⊖⊖
⊕⊕⊕⊕⊕⊕⊕⊕
7 ZERO PAIRS
CANCEL

4. $16 + (-11)$

5. $-22 + (-7) = -29$

NO ZERO PAIRS
COMBINE

6. $-50 + 50$

7. $-10 + (-10) = -20$

NO ZERO PAIRS
COMBINE

8. $100 + (-25)$

9. $-35 + (-20) = -55$

NO ZERO PAIRS
COMBINE

10. $-7 + (-3) + 10$

11. $-42 + \overbrace{36 + (-36)}^{\text{TOTAL ZERO}} = -6$

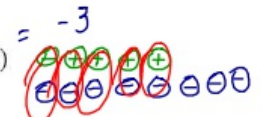
36 ZERO PAIRS
CANCEL

12. $-17 + 17 + 9$

Lesson 2 Skills Practice

Add Integers

Add.

1. $5 + (-8) = -3$


2. $-3 + 3$

3. $-3 + (-8) = -11$

COMBINE NO ZERO PAIRS

4. $-7 + (-7)$

5. $-8 + 10 = 2$

CANCEL 8 ZERO PAIRS

6. $-7 + 13$

7. $15 + (-10) = 5$ 10 ZERO PAIRS
 CANCEL

8. $-11 + (-12)$

9. $25 + (-12) = 13$ 12 ZERO PAIRS
 CANCEL

10. $-14 + (-13)$

11. $14 + (-27) = -13$ 14 ZERO PAIRS
 CANCEL

12. $-28 + 16$

13. $5 + 11 + (-5) = 11$

$5 + (-5) = 0$
 ZERO

14. $7 + (-5) + 5$

15. $9 + (-9) + 10 = 10$
 ZERO

16. $-2 + 19 + 2$

17. **FOOTBALL** The Dolphins football team gained 16 yards on their first play then lost 11 yards on the next play. Write an addition expression to represent this situation. Find the sum and explain its meaning.

AND
 $16 + (-11) = 5$

18. **SAVINGS ACCOUNT** Demetrius deposits \$120 into his account. One week later, he withdraws \$36. Write an addition expression to represent this situation. How much higher or lower is the amount in his account after these two transactions?