



Applications

For Exercises 1–12, use your algorithms to find each sum without using a calculator.

1. $+12 + +4$

2. $+12 + -4$

3. $-12 + +4$

4. $-7 + -8$

5. $+4.5 + -3.8$

6. $-4.5 + +3.8$

7. $-250 + -750$

8. $-6,200 + +1,200$

9. $+0.75 + -0.25$

10. $+\frac{2}{3} + -\frac{1}{6}$

11. $-\frac{5}{12} + +\frac{2}{3}$

12. $-\frac{8}{5} + -\frac{3}{5}$

13. Find each sum.

a. $+3.8 + +2.7$

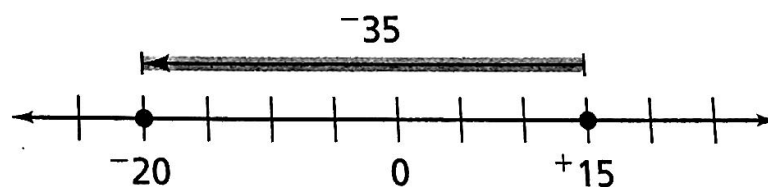
b. $-3.8 + -2.7$

c. $-3.8 + +2.7$

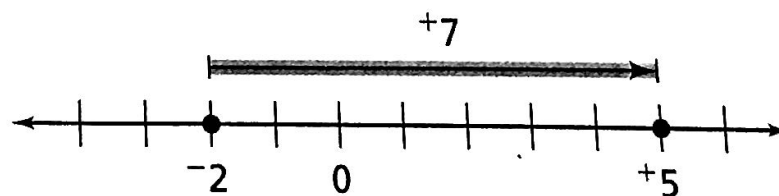
d. $+3.8 + -2.7$

14. Write an addition number sentence that matches each diagram.

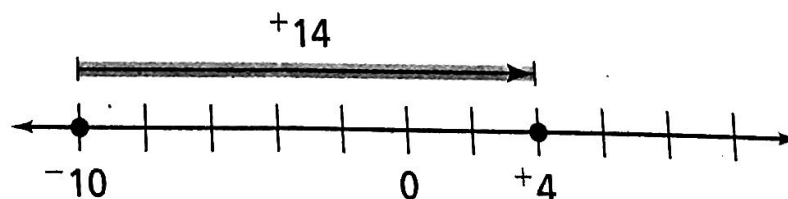
a.



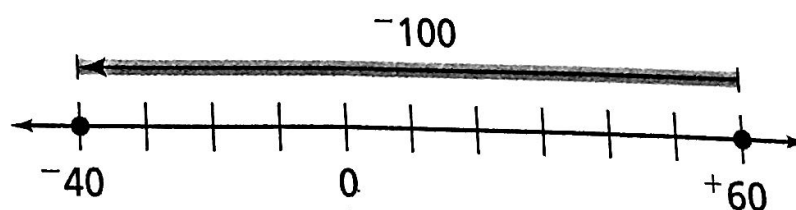
b.



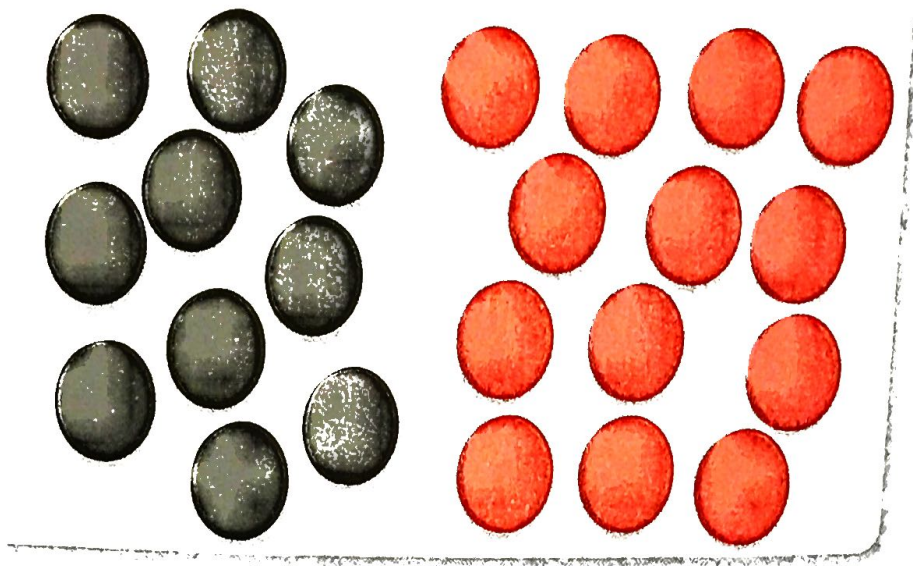
c.



d.



For Exercises 15 and 16, use the chip board below. The chip board has 10 black chips and 13 red chips.



15. What is the value shown on the board?
16. Write a number sentence to represent each situation. Then find the new value of the chip board.
- Remove 5 red chips from the original board.
 - Then add 5 black chips.
 - Then add 4 black chips and 4 red chips.
17. Use properties of addition to find each value.
- a. $+43 + -47 + -43$ b. $+5.2 + -5.2 + \frac{-4}{7}$ c. $+5\frac{2}{5} + \frac{+3}{7} + -5\frac{2}{5}$

Use properties of addition to find each difference