

Use the appropriate mathematical operations to simplify the following expressions.

1. $(-2) + 4 - (-8)$

a. -6

b. 10

c. -10

d. 6

2. $4 + (-1) + (-10) - 5$

a. -12

b. 10

c. 12

d. -10

3. $\left(\frac{1}{3}\right)(-8)\left(\frac{2}{3}\right)(18)$

a. 16

b. 32

c. -144

d. -32

4. $(-4)\left(\frac{1}{2}\right)(-3)$

a. -6

b. -24

c. $-12\frac{1}{2}$

d. 6

5. $-48 \div (-3)$

a. 16

b. 12

c. -16

d. -12

6. $-86 \div 4$

a. 21.5

b. -21.2

c. -21.5

d. 21.5

7. $2\frac{2}{5} + 1\frac{1}{2}$

a. $3\frac{3}{7}$

b. $1\frac{1}{3}$

c. $3\frac{9}{10}$

d. $3\frac{3}{10}$

8. $\left(-2\frac{1}{4}\right) + \left(4\frac{2}{3}\right)$

a. $2\frac{3}{7}$

b. $2\frac{11}{12}$

c. $6\frac{11}{12}$

d. $-2\frac{3}{7}$

9. $-7\frac{1}{3} + \left(-2\frac{3}{4}\right)$

a. $9\frac{2}{7}$

b. $-9\frac{13}{12}$

c. $-8\frac{1}{12}$

d. $-10\frac{1}{12}$

10. $5 - 3\frac{3}{8}$

a. $1\frac{5}{8}$

b. $2\frac{3}{8}$

c. $-2\frac{3}{8}$

d. $2\frac{5}{8}$

11. $5\frac{2}{5} - \left(-2\frac{1}{4}\right)$

a. $7\frac{3}{9}$

b. $7\frac{13}{20}$

c. $3\frac{3}{20}$

d. $-3\frac{1}{3}$

12. $\left(2\frac{5}{8}\right)\left(-1\frac{2}{3}\right) =$

a. $-2\frac{10}{24}$

b. $2\frac{5}{12}$

c. $4\frac{5}{8}$

d. $-4\frac{3}{8}$

13. $\left(2\frac{1}{2}\right)\left(-5\frac{1}{4}\right)$

a. $-10\frac{1}{8}$

b. $-13\frac{1}{8}$

c. $10\frac{1}{4}$

d. $-10\frac{3}{4}$

14. $\frac{3}{10} \div \frac{4}{5}$

a. $\frac{8}{3}$

b) $\frac{6}{25}$

c. $\frac{25}{6}$

d. $\frac{3}{8}$

15. $3 \div 1\frac{7}{8}$

a. $5\frac{5}{8}$

b. $3\frac{8}{7}$

c. $\frac{5}{8}$

d. $1\frac{3}{5}$

16. $3\frac{1}{5} \div -6\frac{2}{3}$

a. $-\frac{12}{25}$

b. $-\frac{3}{64}$

c. $-\frac{1}{15}$

d. $-2\frac{3}{10}$

17. $2[3(5-2)+10]$

a. 36

b. 28

c. 38

d. 26

18. $12 \div 6 \times 3^2$

a. 18

b. 36

c. 27

d. 30

19. $\frac{14 \div 2 - 1}{9 + 7 \times 3}$

a. $\frac{6}{48}$

b. $\frac{1}{8}$

c. $\frac{7}{24}$

d. $\frac{1}{5}$

Evaluate each expression for the given values.

20. $(3y - 2x)^2$ when $x = 3$ and $y = 4$

a. 25

b. 36

c. -1

d. 1

21. $8 - (y - x)$ when $x = -2$ and $y = 5$

a. 1

b. 5

c. 15

d. -5

22. $xy^2 - 4x + 2y$ when $x = 3$ and $y = 2$

a. 31

b. 34

c. 10

d. 4

Write each phrase as a variable expression.

23. The quotient of 6 and a number

a. $6n$

b. $\frac{6}{n}$

c. $n - 6$

d. $\frac{n}{6}$

24. Four less than twice a number

a. $4 - 2x$

b. $4 < 2x$

c. $2x - 4$

d. $4 > 2x$

25. The product of a number and 5

a. $x - 5$

b. $x + 5$

c. $5x$

d. $\frac{x}{5}$