

Cumulative Review (Chapters 1–4)

Simplify.

- $(6x - 3) - (4x + 2)$
- $\frac{1}{2}(101 - 43)$
- $-2.2 + 3.8 - 5.6 + 4$
- $15s - (2s - 9)$
- $-7 - (-20) \div 2$
- $-\frac{3}{5} + 4\frac{5}{8} - \frac{2}{5} + 7\frac{1}{8}$
- $3^3 + 42 \div 3 + 4$
- $(9a - 5) + (4a + 7)$
- $-3|6 - 12|$
- $(5x - 2)(2x + 3)$
- $(4a^3)(5a)^2$
- $5(3z^2 - 2z + 4)$
- $-4x^2(3x^2 - 2x - 5)$
- $(3y^3)(2y^2) - 2(y)(y^4)$
- $(5 - 4x)(3 + 2x)$

Evaluate each expression if $w = \frac{1}{5}$, $x = -1$, $y = -3$, and $z = 2$.

- $w(3y + x)$
- $(xz - y)^5$
- $w(z - (-y))$
- $z(x - 2y)$

Solve. If the equation is an identity or has no solution, state that fact.

- $|\div x| = 9$
- $|y - 1| + 4 = 0$
- $5 = |x| + 5$
- $c - (-4) = -8$
- $3x - 2 = x + 6$
- $42z = -42$
- $0 = \frac{1}{3}n + 2$
- $-10 = 4m + 2$
- $\frac{1}{4}x = 20$
- $3(2 + x) = -4(x - 5)$
- $(11x - 3) - (4 + 2x) = 11$
- $(2n + 9) + (5n - 4) = 6n + 9$
- $(4y - 2) + (4 - 2y) = 30$
- $2(c - 1) - 7 = 1$
- $(2x - 3)(3x + 1) = (3x - 4)(2x + 2)$

Solve each equation for the variable shown in color.

- $am - bn = c$; m
- $by - ax = 0$; x

Solve.

- One third of the sum of two consecutive odd integers is five less than the smaller integer. Find both integers.
- Randy and Amy left school at the same time and began walking in opposite directions. Randy walked at a rate of 3.6 km/h and Amy walked at a rate of 4.2 km/h. How far apart were they after 10 min?
- Jessica has 16 dimes and quarters. Whitney has twice as many dimes and $\frac{1}{3}$ as many quarters as Jessica has. If they both have the same amount of money, what coins does each have?
- A rectangular piece of plywood is trimmed to make a square by cutting a 4-cm strip off the top and a 2-cm strip off one side. If the area of the original piece is 74 cm^2 greater than the area of the square, find the dimensions of the rectangle.