

4

Expressions

Answers start on page 93.

- The expression $b^2 - 8b + 16$ is equivalent to:
 - $(b + 4)^2$
 - $(b - 4)^2$
 - $(b + 4)(b - 4)$
 - $(b - 8)(b - 2)$
 - $(b - 8)(b + 2)$
- Which of the following is a simplified form of the expression $a(b + c) + b(a + c) + c(a + b)$?
 - $3abc$
 - $6abc$
 - $2a + 2b + 2c$
 - $2ab + 2bc + 2ac$
 - $3ab + 3bc + 3ac$
- Which of the following expressions is equivalent to $-x^2y - xy^2$?
 - $-xy(x + y)$
 - $-xy(x - y)$
 - $-xy(y - x)$
 - $xy(x + y)$
 - $xy(x - y)$
- $(3a - 4b)(5b + 2a)$ is equivalent to:
 - $6ab$
 - $23ab$
 - $6a^2 + 7ab - 20b^2$
 - $6a^2 + 23ab - 20b^2$
 - $-7a^2b^2$
- It takes 4 cups of water to make 3 pizzas. It takes 5 cups of water to make 4 cakes. Which of the following expressions gives the number of cups of water needed to make x pizzas and y cakes?
 - $4x + 5y$
 - $12x + 20y$
 - $\frac{3}{4}x + \frac{4}{5}y$
 - $\frac{4}{3}x + \frac{4}{5}y$
 - $\frac{4}{3}x + \frac{5}{4}y$
- Which of the following expressions is equivalent to $4x^2 + 2x - 6$?
 - $(4x + 1)(x - 6)$
 - $(4x - 1)(x + 6)$
 - $2(x - 1)(2x + 3)$
 - $2(x + 1)(2x - 3)$
 - $2(2x - 1)(x + 3)$
- The expression $(x + 2)^2 - 4x - 5$ is equivalent to:
 - $x^2 - 5$
 - $x^2 + 1$
 - $x^2 - 4x - 1$
 - $(x + 1)(x - 1)$
 - $(x - 4)(x - 1)$

8. For $x^2 \neq 16$, $\frac{(x+4)^2}{x^2-16} = ?$

A. $\frac{x+4}{x-4}$

B. $\frac{1}{x+4}$

C. $\frac{1}{x-4}$

D. $-\frac{1}{4}$

E. $\frac{1}{4}$

9. Which of the following is the least common denominator for $\frac{1}{3x-6} + \frac{1}{2(x-2)^2}$?

A. $(x-2)$

B. $(x-2)^2$

C. $6(x-2)$

D. $6(x-2)^2$

E. $6(x-2)^3$

10. At Jack's Burger Shack, Michael orders
- x
- burgers with
- y
- additional condiments on each burger. Each burger cost
- b
- dollars and each additional condiment cost
- c
- dollars. If Michael paid less than \$30 for his order, which of the following expressions represents the amount of money, in dollars, that Michael should have received back after he paid for his order with \$30?

(Note: There is no tax on food at Jack's Burger Shack.)

A. $bx + cy$

B. $bx + cxy$

C. $30 - (bx + cy)$

D. $30 - (bx - cxy)$

E. $30 - (bx + cxy)$