

Worksheet 14

Perform the indicated operations and simplify.

1. $\frac{x^2-2x-3}{x^2+x-12} \div \frac{x+1}{x+4} =$

A. 1

B. $\frac{x-3}{x+3}$

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

D. $\frac{x-1}{x+1}$

2. $\frac{x^2-2x-15}{x-1} \div \frac{x-5}{x^2-1} =$

A. 2

B. x^2+4x+3

C. $\frac{x-3}{x+1}$

D. $\frac{x+3}{x-1}$

3. $\frac{8x^3y^2}{14x^8} \div \frac{3y^2}{6x^2y^2} =$

A. $\frac{8xy}{7}$

B. $\frac{8y^2}{7x^3}$

C. $\frac{8y}{7x^2}$

D. $\frac{8}{7x^2y}$

4. $\frac{3}{x-2} + \frac{1}{x-2} =$

A. $-\frac{1}{x}$

B. $\frac{2}{x}$

C. $\frac{4}{x-2}$

D. $\frac{2}{x-1}$

5. $\frac{3}{x+1} - \frac{x}{x+3} =$

A. $\frac{-x^2+2x+9}{x^2+4x+3}$

B. $\frac{-x^2+4x+9}{x^2+4x+3}$

C. $\frac{2+x}{4+2x}$

D. $\frac{3-x}{(x+3)-(x+1)}$

6. $\frac{x}{x-5} + \frac{5}{x-5} =$

A. $\frac{x+5}{x-5}$

B. $\frac{x+5}{2x-10}$

C. -1

D. $\frac{5x}{(x-5)^2}$

7. $\frac{x}{x+3} - \frac{x-4}{x} =$

A. $\frac{x^2+3x}{x+12}$

B. $\frac{x-12}{x^2+3x}$

C. $\frac{x+12}{x(x+3)}$

D. $\frac{13}{3}$

8. $\frac{x}{x-1} + \frac{3}{x+2} =$

A. $\frac{x+3}{(x-1)+(x+2)}$

B. $\frac{3+x}{-x^2+x-2}$

C. $\frac{3x}{x^2+x-2}$

D. $\frac{x^2+5x-3}{(x-1)(x+2)}$

9. $\frac{8a}{a^2-1} + \frac{2}{1-a} - \frac{4}{a+1} =$

A. $\frac{1-a}{2}$

B. $\frac{a-1}{2}$

C. $\frac{2}{a-1}$

D. $\frac{2}{1-a}$

10. $\frac{3x^2y}{5y^3} \cdot \frac{10xy^2}{9x^3} =$

A. $\frac{3x}{2y}$

B. $\frac{2x^2}{3y^2}$

C. $\frac{3x^3}{2y^3}$

D. $\frac{2}{3}$

Solve the problem.

11. Which of the following is a factor of $x^2a^2 - 100$?

A. $(xa+100)$

B. $(xa+1)$

C. $(xa-10)$

D. $(xa-100)$

12. Which of the following is a solution of the equation $3x^2 - 5x - 2 = 0$?

A. -2

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

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

D. 6