

Review: Rational Polynomial Expressions

Solve each equation.

$$1) \frac{3x-2}{4} = \frac{5+x}{2}$$

$$2) \frac{4}{x-2} = \frac{x-2}{9}$$

3) 24 is what % of 8?

4) 84 is 60% of what #?

5) Find 6.5% of 80.

6) what % of 17 is 34?

Simplify each expression

$$7) \frac{2x^2+5x+3}{x^2-1}$$

$$8) \frac{3x^2-4x+1}{x^2-2x+1}$$

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

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Multiply / Divide

$$10) \frac{2x^2 - 7x + 5}{x^2 - 2x + 1} \cdot \frac{2x + 5}{4x^2 - 25}$$

$$11) \frac{x^2 + 4x - 32}{x + 5} \div \frac{x^2 - 7x + 12}{x - 3}$$

$$12) \frac{3x^2 - 27x + 54}{x^2 - 7x + 12} \div \frac{4x - 24}{6x - 18}$$

$$13) \frac{4x^2 + 11x + 6}{x^2 - x - 6} \div \frac{x^2 + 8x + 16}{x^2 + x - 12}$$

Add / Subtract

$$14) \frac{2x}{x+7} + \frac{4}{x+4}$$

$$15) \frac{x}{x+1} + \frac{1}{x+1}$$

$$16) \frac{3x+2}{4x+1} + \frac{7}{x}$$

$$17) \frac{3x-8}{x+4} + \frac{9}{x+1}$$

$$18) \frac{3}{x^2 - x - 2} + \frac{x+1}{x^2 + 2x + 1}$$

$$19) \frac{x+2}{x+1} - \frac{x+1}{x^2 - 1}$$

Answers:

1) $x = 12$

2) $x = -4, 8$

3) 300%

4) 140

5) 5.2

6) 200%

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Answers:

$$7) \frac{2x+3}{x-1}$$

$$8) \frac{3x-1}{x-1}$$

$$9) \frac{x^2(x+1)}{x-2}$$

$$10) \frac{1}{x-1}$$

$$11) \frac{x+8}{x+5}$$

$$12) \frac{9(x-3)}{2(x-4)}$$

$$13) \frac{4x+3}{x+4}$$

$$14) \frac{2x^2+12x+28}{(x+7)(x+4)}$$

$$15) 1$$

$$16) \frac{3x^2+30x+7}{x(4x+1)}$$

$$17) \frac{3x^2+4x+28}{(x+4)(x+1)}$$

$$18) \frac{1}{x-2}$$

$$19) \frac{x^2-3}{(x+1)(x-1)}$$