

7.3 Practice - Least Common Denominator

Build up denominators.

$$1) \frac{3}{8} = \frac{?}{48}$$

$$2) \frac{a}{5} = \frac{?}{5a}$$

$$3) \frac{a}{x} = \frac{?}{xy}$$

$$4) \frac{5}{2x^2} = \frac{?}{8x^3y}$$

$$5) \frac{2}{3a^3b^2c} = \frac{?}{9a^5b^2c^4}$$

$$6) \frac{4}{3a^5b^2c^4} = \frac{?}{9a^5b^2c^4}$$

$$7) \frac{2}{x+4} = \frac{?}{x^2-16}$$

$$8) \frac{x+1}{x-3} = \frac{?}{x^2-6x+9}$$

$$9) \frac{x-4}{x+2} = \frac{?}{x^2+5x+6}$$

$$10) \frac{x-6}{x+3} = \frac{?}{x^2-2x-15}$$

Find Least Common Denominators

$$11) 2a^3, 6a^4b^2, 4a^3b^5$$

$$12) 5x^2y, 25x^3y^5z$$

$$13) x^2-3x, x-3, x$$

$$14) 4x-8, x-2, 4$$

$$15) x+2, x-4$$

$$16) x, x-7, x+1$$

$$17) x^2-25, x+5$$

$$18) x^2-9, x^2-6x+9$$

$$19) x^2+3x+2, x^2+5x+6$$

$$20) x^2-7x+10, x^2-2x-15, x^2+x-6$$

Find LCD and build up each fraction

$$21) \frac{3a}{5b^2}, \frac{2}{10a^3b}$$

$$22) \frac{3x}{x-4}, \frac{2}{x+2}$$

$$23) \frac{x+2}{x-3}, \frac{x-3}{x+2}$$

$$24) \frac{5}{x^2-6x}, \frac{2}{x}, \frac{-3}{x-6}$$

$$25) \frac{x}{x^2-16}, \frac{3x}{x^2-8x+16}$$

$$26) \frac{5x+1}{x^2-3x-10}, \frac{4}{x-5}$$

$$27) \frac{x+1}{x^2-36}, \frac{2x+3}{x^2+12x+36}$$

$$28) \frac{3x+1}{x^2-x-12}, \frac{2x}{x^2+4x+3}$$

$$29) \frac{4x}{x^2-x-6}, \frac{x+2}{x-3}$$

$$30) \frac{3x}{x^2-6x+8}, \frac{x-2}{x^2+x-20}, \frac{5}{x^2+3x-10}$$



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7.3

Answers - Least Common Denominators

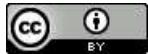
- 1) 18
- 2) a^2
- 3) ay
- 4) $20xy$
- 5) $6a^2c^3$
- 6) 12
- 7) $2x - 8$
- 8) $x^2 - 2x - 3$
- 9) $x^2 - x - 12$
- 10) $x^2 - 11x + 30$
- 11) $12a^4b^5$
- 12) $25x^3y^5z$
- 13) $x(x - 3)$
- 14) $4(x - 2)$
- 15) $(x + 2)(x - 4)$
- 16) $x(x - 7)(x + 1)$
- 17) $(x + 5)(x - 5)$
- 18) $(x - 3)^2(x + 3)$
- 19) $(x + 1)(x + 2)(x + 3)$
- 20) $(x - 2)(x - 5)(x + 3)$
- 21) $\frac{6a^4}{10a^3b^2}, \frac{2b}{10a^3b^2}$
- 22) $\frac{3x^2 + 6x}{(x - 4)(x + 2)}, \frac{2x - 8}{(x - 4)(x + 2)}$
- 23) $\frac{x^2 + 4x + 4}{(x - 3)(x + 2)}, \frac{x^2 - 6x + 9}{(x - 3)(x + 2)}$
- 24) $\frac{5}{x(x - 6)}, \frac{2x - 12}{x(x - 6)}, \frac{-3x}{x(x - 6)}$
- 25) $\frac{x^2 - 4x}{(x - 4)^2(x + 4)}, \frac{3x^2 + 12x}{(x - 4)^2(x + 4)}$
- 26) $\frac{5x + 1}{(x - 5)(x + 2)}, \frac{4x + 8}{(x - 5)(x + 2)}$

$$27) \frac{x^2 + 7x + 6}{(x - 6)(x + 6)^2}, \frac{2x^2 - 9x - 18}{(x - 6)(x + 6)^2}$$

$$28) \frac{3x^2 + 4x + 1}{(x - 4)(x + 3)(x + 1)}, \frac{2x^2 - 8x}{(x - 4)(x + 3)(x + 1)}$$

$$29) \frac{4x}{(x - 3)(x + 2)}, \frac{x^2 + 4x + 4}{(x - 3)(x + 2)}$$

$$30) \frac{3x^2 + 15x}{(x - 4)(x - 2)(x + 5)}, \frac{x^2 - 4x + 4}{(x - 4)(x - 2)(x + 5)}, \frac{5x - 20}{(x - 4)(x - 2)(x + 5)}$$



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