



Quiz 11.3 Multiply:

$$56. \frac{x^2 - 1}{x^2 - 4} \cdot \frac{x^2 - 5x + 6}{x^2 - 2x - 3}$$

() / ()

$$f(x) = 4x - 3$$

~~f(x)~~

$$\frac{f^{(1)}(a+h) - f^{(2)}(a)}{h} \quad (3)$$



$$\frac{(4(a+h) - 3) - (4a + 3)}{h} \rightarrow \frac{\cancel{4a} + 4h - \cancel{3} - \cancel{4a} - \cancel{3}}{h}$$

$$\rightarrow \frac{4h}{h} \rightarrow (4)$$

11.2 (day 1)

adding fractions



$$\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$$

$$\frac{2x+3}{x^2-25} + \frac{3x+2}{x^2-25} = \frac{5x+5}{x^2-25}$$

$$= \frac{5(x+1)}{(x-5)(x+5)}$$

$$\frac{\overbrace{x^2 - 2} + \overbrace{-19 + 4x}}{x^2 + 6x - 7} = \frac{x^2 + 4x - 21}{x^2 + 6x - 7}$$

$$\frac{x+7}{x-7} \text{ conjugates}$$

$$\frac{x-7}{7-x} = -1$$

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

$$= \frac{x-3}{x-1}$$

$$\frac{20y^2 + 5y + 1}{6y^2 + y - 2} + \frac{-8y^2 + 12y + 5}{6y^2 + y - 2} \quad \text{subtract}$$

$$\frac{12y^2 + 17y + 6}{6y^2 + y - 2} = \frac{(3y+2)(4y+3)}{(3y+2)(2y-1)} \quad \begin{array}{l} 9y \\ 8y \end{array}$$

$$= \frac{4y+3}{2y-1} \quad \begin{array}{l} -3y \\ +4y \end{array}$$

$$\frac{3.3}{10.3} + \frac{5.3}{6.5}$$

$$\frac{3.3}{2.5.3} + \frac{5.5}{2.3.5}$$

$$\frac{\overset{9}{\cancel{2.5.3}}}{2.5.3} + \frac{25}{2.5.3} = \frac{34}{2.5.3}$$

$$= \frac{\cancel{2.17}}{2.5.3}$$

$$\frac{7}{45} + \frac{5}{36}$$

LCD 45 & 36

$$\frac{\overset{7}{\cancel{3.3.5.}}}{3.3.5.} + \frac{\overset{5}{\cancel{3.3.2.2}}}{3.3.2.2}$$

$$\frac{\quad}{3.3.5.2} + \frac{\quad}{3.3.5.2.2}$$

finding the LCD of

$$\frac{3x-2}{x^2-x-6} \quad \text{and} \quad \frac{4x-3}{x^2-9}$$

$(x+2)(x-3)$ $(x+3)(x-3)$

?

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$(x+2)(x-3)(x+3)$ and $(x+2)(x-3)(x+3)$

$$\frac{3}{y^2 - y - 20}$$
$$(y+4)(y-5)$$

and find

$$\frac{LCD}{y}$$
$$\frac{y}{2y^2 + 7y - 4}$$
$$(2y-1)(y+4)$$

$$LCD = (y+4)(y-5)(2y-1)$$

$$\frac{x^2 - 6}{x^2 + 9x + 18} - \frac{(x-4)(x+3)}{x+6(x+3)}$$

Subtract

$(x+6)(x+3)$

$$\frac{x^2 - 6}{(x+6)(x+3)} + \frac{-x + x + 12}{(x+6)(x+3)} = \frac{x^2 - 6}{(x+6)(x+3)}$$

$$= \frac{1}{x+3}$$

$$\frac{1}{x^2-16} \quad \frac{(-1)5}{(-1)16-x^2}$$

$$\frac{1}{x^2-16} + \frac{+5}{x^2-16} =$$

$$\frac{1}{x^2 - 6} - \frac{1}{6 - x^2}$$

$$\frac{1}{5} + \frac{1}{7}$$

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

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