

Warm-up 3/24/17

Solve

1. $\frac{4}{x} = \frac{6^2}{155}$

2. $\frac{3}{x} = \frac{12}{11}$

$x = 10$

$x = \frac{11}{4} = 2.75$

$$\frac{3}{x+1} = \frac{9}{4x+5}$$

$$\frac{3}{5x} = \frac{2}{x-7}$$

$$9(x+1) = 3(4x+5)$$

$$9x + 9 = 12x + 15$$

$$9x = 12x + 6$$

$$-3x = 6$$

$$x = -2$$

$$2(5x) = 3(x-7)$$

$$10x = 3x - 21$$

$$7x = -21$$

$$x = -3$$

$$\frac{45}{4x} + \frac{7^x}{4^x} = -\frac{9}{x} \quad 4x$$

$$\frac{7x+20}{4x} = \frac{-9}{x}$$

$$-9(4x) = x(7x+20)$$

$$-36x = 7x^2 + 20x$$

$$0 = 7x^2 + 56x$$

$$0 = 7x(x+8)$$

$$\cancel{x=0} \quad x+8=0 \\ x=-8$$

$$\frac{5}{x}(4x) + \frac{7}{4}(4x) = -\frac{9}{x}(4x)$$

$$20 + 7x = -36$$

$$7x = -56$$

$$x = -8$$

$$\frac{x-5}{x-5} - \frac{8}{x-5} = \frac{3}{x}$$

$$\frac{x-13}{x-5} = \frac{3}{x}$$

$$x(x-13) = 3(x-5)$$

$$x^2 - 13x = 3x - 15$$

$$x^2 - 16x + 15 = 0$$

$$(x-15)(x-1) = 0$$

$$x = 15, 1$$

$$(x+3)(x-3) \frac{6}{x-3} = \frac{8x^2}{x^2-9} - \frac{4x}{x+3} (x-3)(x+3)$$

$$6(x+3) = 8x^2 - 4x(x-3)$$

$$6x+18 = 8x^2 - 4x^2 + 12x$$

HW Pg 593 #4-28e

$$0 = 4x^2 + 6x - 18$$

$$0 = 2x^2 + 3x - 9$$

$$0 = 2x^2 - 3x + 6x - 9$$

$$0 = x(2x-3) + 3(2x-3)$$

$$0 = (2x-3)(x+3)$$

$$2x-3=0 \quad x+3=0$$

$$2x=3$$

$$x = \frac{3}{2}$$

~~$$x = -3$$~~

$$2(-9) = -18$$

P =	S =
-18	3
-3, 6	3