

November 18, 2015
 * Exam #3 - Monday
 November 30th
 60% - 40%
 ↓
 Factoring
 • GCF
 • Trinomials
 • Special Cases
 • Solving Trinomials by factoring
 • Simplifying & Solving Rational Expressions & Equations
 ↓
 Check type question
 • 40% Everything Else
 • Prior exams & quizzes

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#17)

$$\frac{4x}{x^2 + 4x - 5} - \frac{5}{x-1}$$

$(x+5)(x-1)$ LCM \rightarrow LCD: $(x+5)(x-1)$

$$\frac{4x(4) - 5(x+5)(x-1)}{4(x+5)(x-1)}$$

$$\frac{16x - 5x^2 - 25(x-1)}{4(x+5)(x-1)}$$

$$\frac{16x - 5x^2 + 5x - 25x + 25}{4(x+5)(x-1)}$$

$$\frac{-5x^2 - 4x + 25}{4(x+5)(x-1)}$$

$-(5x^2 + 4x - 25)$

$ac = -125$
 $r = 4$

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#9)

$$\frac{6b + 18}{b^2} + \frac{1}{b} = \frac{3}{b}$$

LCD: b^2

$$\frac{6b + 18}{b^2} + \frac{1}{b} = \frac{3}{b}$$

$$\frac{6b + 18}{1} \cdot \frac{1}{b^2} + \frac{1}{1} \cdot \frac{1}{b} = \frac{3}{1} \cdot \frac{1}{b}$$

$$6b + 18 + b = 3b$$

$$\frac{4b}{4} = \frac{-18}{4}$$

$$b = -\frac{9}{2}$$

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$$\frac{\frac{3}{6} \left(-\frac{9}{2}\right) + 18}{\left(-\frac{9}{2}\right)^2} + \frac{1}{\left(-\frac{9}{2}\right)} = \frac{3}{\left(-\frac{9}{2}\right)}$$

$$\frac{-27 + 18}{\frac{81}{4}} + \frac{1}{1} \cdot \frac{-2}{9} = \frac{1}{1} \cdot \frac{-2}{9}$$

$$-\frac{1}{1} \cdot \frac{4}{81} + \frac{-2}{9} = -\frac{2}{9}$$

$$-\frac{4}{81} + \frac{-2}{9} = -\frac{2}{9}$$

$$\frac{-4 + (-2)}{9} = -\frac{2}{9}$$

$$-\frac{6}{9} = -\frac{2}{3}$$

$$-\frac{2}{3} = -\frac{2}{3} \checkmark$$

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#5)

$$\frac{3m + 15}{4m^2} = \frac{1}{m^2} - \frac{(m-3)}{4m^2}$$

$$\frac{3m + 15}{4m^2} = \frac{4m^2}{4m^2} - \frac{4m^2(m-3)}{4m^2}$$

$$3m + 15 = 4 - (m-3)$$

$$3m + 15 = 4 - m + 3$$

$$3m + 15 = 7 - m$$

$$4m = -8$$

$$m = -2$$

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#11)

$$\frac{1}{b^2 - 7b + 10} + \frac{1}{(b-2)} = \frac{2}{b^2 - 7b + 10}$$

$(b-5)(b-2)$

$$\frac{1}{(b-2)(b-5)} + \frac{1}{(b-2)} = \frac{2}{(b-5)(b-2)}$$

$$\frac{1}{(b-2)(b-5)} + \frac{1}{(b-2)} = \frac{2}{(b-5)(b-2)}$$

$$1 + b - 5 = 2$$

$$b - 4 = 2$$

$$b = 6$$

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$$\#17) \quad \frac{4}{a} = \frac{1}{a^2+4a} + \frac{a+3}{a^2+4a}$$

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