

August 28, 2017
 * Prep. for College Algebra
 Package due Wednesday.

Aug 28-10:53 AM

#20) $\frac{4x+8}{15} \div \frac{5x+10}{10}$
 Keep Change Flip
 $\frac{4x+8}{15} \cdot \frac{10}{5x+10}$
 $\frac{4(x+2)}{\cancel{15}^3} \cdot \frac{\cancel{10}^2}{5(x+2)}$
 $\frac{4}{3} \cdot \frac{2}{5} = \frac{8}{15}$

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#23) $\frac{7x}{15x} + \frac{6x}{7x}$
 $\frac{7}{x} + \frac{6}{x} = \frac{7+6}{x} = \frac{13}{x}$
 $x \neq 0$
 $2+3 = 5$
 $5-3 = 2$
 $5-2 = 3$

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#25) $\frac{4}{1} \left(\frac{x}{4} - \frac{1}{2} = \frac{x+6}{2} \right)$ LCD
 $x - 2 = 2(x+6)$
 $x - 2 = 2x + 12$
 $-x - 12 = -x - 12$
 $-14 = x$
 ck $\left[\frac{-14}{4} - \frac{1}{2} \right] = \frac{-14+6}{2}$
 $\frac{-14-2}{4} = -\frac{8}{2}$
 $-\frac{16}{4} = -4$
 $-4 = -4 \checkmark$

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Complex Fraction
 $\frac{1 + \frac{3}{7}}{2 + \frac{4}{7}} = \frac{\frac{1}{1} + \frac{3}{7}}{\frac{2}{1} + \frac{4}{7}}$
 $= \frac{\frac{7+3}{7}}{\frac{14+4}{7}} = \frac{10}{7} \cdot \frac{7}{18}$
 $= \frac{10}{18} = \frac{5}{9}$

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#24) $\frac{6}{x+8} + \frac{9}{8x+64}$ recall $\frac{a}{b} \pm \frac{c}{d} = \frac{ad \pm bc}{bd}$ (bd = common)
 $\frac{6(8) + 9}{8(x+8)}$ LCD: $(x+8)8$
 $\frac{48 + 9}{8(x+8)} = \frac{57}{8(x+8)} = \frac{57}{8x+64}$

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#22)

$$f(x) = \frac{1-4x}{x^2-2x-15} \neq \emptyset$$

Rational Function

Domain: $(-\infty, -3) \cup (-3, 5) \cup (5, \infty)$

$$(x-5)(x+3) \neq 0$$

① $x-5 \neq 0$
 $x \neq 5$

② $x+3 \neq 0$
 $x \neq -3$

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Input x → (value)

Horizontal axis

Independent Variable

Domain $(0, 3)$

f

Some Rule

$$2x+3$$

Output y →

Vertical axis

Dependent Variable

Range

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