Algebra 5-7/5-8 Equivalent Fractions & Clearing Fractions

Warm-Up

1. Simplify. $\frac{1}{4} \cdot \frac{2}{3}$ $= \frac{2}{12} = \frac{1}{6}$ (÷2, ÷2)

2. Simplify. $2 \cdot \frac{3}{8}$ $= \frac{6}{8} = \frac{3}{4}$

3. What is the common denominator of $\frac{2}{5}$ and $\frac{1}{4}$? 20

4. What is the common denominator of $\frac{1}{7}$ and $\frac{2}{3}$? 21

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Algebra 5-7 Equivalent Fractions

1. Solve for **3d + 4 = e** for d. (hint: This means we want to get d by itself.)

$-4 \quad -4$

$3d = e - 4$

$\frac{3d}{3} = \frac{e-4}{3}$

$d = \frac{e-4}{3}$

2. Solve $p = 100 + \frac{a}{2}$ for a.

$-100 \quad -100$

$p - 100 = \frac{a}{2}$

$2 \cdot (p-100) = \frac{a}{2} \cdot 2$

$2(p-100) = a$

3. Solve $\frac{s}{y} + t = l \cdot r$ for s.

$-t \quad -t$

$\frac{s}{y} = lr - t$

$y \cdot \frac{s}{y} = (lr - t)y$

$s = (lr + t)y$

Algebra 5-8 Clearing Fraction

- In order to get rid of fractions Multiply the entire equation by a common denominator.
- In order to get rid of decimals, Multiply by multiples of 10.

Ex) $10(.6) = 6$

$10(.62) = 62$

4. Solve by clearing the fraction. $\frac{2}{5}x + 11 = \frac{3}{4}x$

20

$\frac{20}{1} \cdot \frac{2}{5} = \frac{40}{5} = 8$

$20(11) = 220$

$\frac{20}{1} \cdot \frac{3}{4} = \frac{60}{4} = 15$

$8x + 220 = 15x$

$-8x \quad -8x$

$220 = 7x$

$\frac{220}{7} = \frac{7x}{7}$

$x = \frac{220}{7}$

5. Solve by clearing the fraction. $\frac{1}{4}t = 21 - \frac{1}{3}t$

12

$\frac{1}{4} \cdot \frac{12}{1} = \frac{12}{4} = 3$

$21 \cdot 12 =$

$\frac{12}{1} \cdot \frac{1}{3} = \frac{12}{3} = 4$

$3t = 252 - 4t$

$+4t \quad +4t$

$7t = 252$

$\frac{7t}{7} = \frac{252}{7}$

$t = 36$

6. Solve by getting rid of the decimals. $.92m + 2 = m - .4$

100

$.92(100) = 92$

$2(100) = 200$

$m(100) = 100m$

$.4(100) = 40$

$92m + 200 = 100m - 40$

$-92m \quad -92m$

$200 = 8m - 40$

$+40 \quad +40$

$240 = 8m$

$\frac{240}{8} = \frac{8m}{8}$

$m = 30$