

2.1 Solving Equations With Fractions- Day 2

$$\begin{aligned} 1. \quad \frac{3m+1}{4} + \frac{3-2m}{6} &= 2 & \text{LCD}=12 \\ 12\left(\frac{3m+1}{4} + \frac{3-2m}{6}\right) &= 12(2) \\ 3\cancel{12}\left(\frac{3m+1}{\cancel{4}}\right) + \cancel{2}^2\left(\frac{3-2m}{\cancel{6}}\right) &= 12(2) \\ 3(3m+1) + 2(3-2m) &= 12(2) \\ 3(3m) + 3(1) + 2(3) + 2(-2m) &= 12(2) \\ 9m + 3 + 6 - 4m &= 24 \\ 9m - 4m + 3 + 6 &= 24 \\ 5m + 9 &= 24 \\ 5m &= 24 - 9 \\ 5m &= 15 \\ m &= \frac{15}{5} \\ \boxed{m=3} \end{aligned}$$

$$\begin{aligned} 2. \quad \frac{2r-3}{5} - \frac{r-3}{3} &= 2 & \text{LCD}=15 \\ 15\left(\frac{2r-3}{5} - \frac{r-3}{3}\right) &= 15(2) \\ \cancel{3}^3\cancel{15}\left(\frac{2r-3}{\cancel{5}}\right) - \cancel{5}^1\cancel{15}\left(\frac{r-3}{\cancel{3}}\right) &= 15(2) \\ 3(2r-3) - 5(r-3) &= 15(2) \\ 3(2r) + 3(-3) - 5(r) - 5(-3) &= 15(2) \\ 6r - 9 - 5r + 15 &= 30 \\ 6r - 5r - 9 + 15 &= 30 \\ r + 6 &= 30 \\ r &= 30 - 6 \\ \boxed{r=24} \end{aligned}$$

HOMEWORK

Worksheet HW 2.1 - Fraction Equations
Day 2