Algebra 2 Bellwork Monday, February 1, 2016

Solve each equation.

1. $\frac{2x}{9} + \frac{7}{6} = \frac{5}{3}$

2. $\frac{4x}{x+1} = \frac{3}{7}$

3. $\frac{2x}{5} = \frac{8}{x+1}$

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Answers

Solve each equation.

1. $18\left(\frac{2x}{9} + \frac{7}{6}\right) = \left(\frac{5}{3}\right)18$ LCM of 9, 6, 3 is 18

$4x + 21 = 30$

$-21 \quad -21$

$\frac{4x}{4} = \frac{9}{4}$

$x = \frac{9}{4}$

2. $\frac{4x}{x+1} = \frac{3}{7}$ cross multiply

$7(4x) = 3(x+1)$

$28x = 3x + 3$

$-3x \quad -3x$

$\frac{25x}{25} = \frac{3}{25}$

$x = \frac{3}{25}$

3. $\frac{2x}{5} = \frac{8}{x+1}$ cross multiply

$2x(x+1) = 8 \cdot 5$

$2x^2 + 2x = 40$

$2x^2 + 2x - 40 = 0$

$2(x^2 + x - 20) = 0$

$2(x+5)(x-4) = 0$

$x = -5, 4$