

Name: _____

Date: _____

4-5 SOLVING FRACTIONAL EQUATIONS HOMEWORK

FLUENCY

1. Solve each of the following fractional equations. After “clearing” the denominators you should have a linear equation to solve.

(a)
$$\frac{x-2}{3} + \frac{x+1}{6} = \frac{3}{2}$$

(b)
$$\frac{13}{2x} - \frac{4}{15} = \frac{31}{6x}$$

(c)
$$\frac{5}{x+2} + \frac{1}{2} = 3$$

2. Solve each of the fractional equations for all value(s) of x .

(a)
$$x - 8 = -\frac{12}{x}$$

(b)
$$\frac{3}{4} + \frac{1}{2x} = \frac{1}{2x} + \frac{1}{3x^2}$$

(c)
$$\frac{17}{x} - \frac{11}{x+3} = \frac{5x+8}{x+3}$$

(d)
$$\frac{x+10}{2} - \frac{13}{x+1} = \frac{11}{3}$$



3. Solve the following equation for all values of x . Express your answers in simplest $a + bi$ form.

$$\frac{x}{9} = \frac{x-3}{x-1}$$

4. Solve the following equation for all values of x . Be sure to check for extraneous roots.

$$\frac{x}{\sqrt{x+11}} - 1 = \frac{1}{\sqrt{x+11}}$$

5. Solve each of the following equations. Be sure to check for extraneous roots.

(a)
$$\frac{x+1}{x-5} + \frac{2}{x-6} = \frac{2}{x^2 - 11x + 30}$$

(b)
$$\frac{x-3}{x-7} - \frac{1}{x} = \frac{28}{x^2 - 7x}$$

