

Name: _____

Date: _____

Learning Goal 6.2

Solving equations, identifying any non-permissible values and extraneous roots.

1. Solve the following rational equations. State any non – permissible values and/or extraneous roots.

a.
$$\frac{-3}{x+2} = \frac{2x}{x-3}$$

b.
$$\frac{x+2}{x-5} = \frac{x}{x-1}$$

c.
$$\frac{3x+1}{x^2-1} = \frac{-x}{x+1}$$

d.
$$\frac{7x-15}{x^2-9} = \frac{x-2}{x-3}$$

e.
$$\frac{9}{y-3} - \frac{4}{y-6} = \frac{18}{y^2-9y+18}$$

f.
$$\frac{3x}{x+2} - \frac{5}{x-3} = \frac{-25}{x^2-x-6}$$

2. Stella takes 4 hours to paint a room. It takes Jose 3 hours to paint the same area. How long will the paint job take if they work together?