LESSON 11: Rational Equations
☐ Rational Equation
☐ To solve a rational equation
☐ Connecting the concepts: expressions versus equations

Use you understanding of fractions and the process of finding least common denominators to solve for x. If no solution exists, state this.

1. $\dfrac{2}{3x} + \dfrac{1}{x} = 10$

2. $\dfrac{x-1}{6x} = \dfrac{4}{9}$

3. $\dfrac{2}{x+5} + \dfrac{1}{x-5} = \dfrac{16}{x^2-25}$

4. $\dfrac{1}{m-3} + 2 = \dfrac{1}{m-3}$

5. $\dfrac{1}{3} - \dfrac{1}{x+2} = \dfrac{x+14}{3x^2-12}$

6. $\dfrac{x^2}{x-3} = \dfrac{9}{x-3}$

7. Let $f(x) = x + \frac{6}{x}$. Find all values of a for which $f(a) = 5$.

8. Let $g(x) = x - \frac{5}{x}$. Find all values of w for which $g(w) = 24$.