Integrated Math 3   Name _____
Algebra Pre-requisites   Date _____
Day 6-Fractions   Period _____

1. Solve the equation: $\dfrac{x}{2} = \dfrac{x+7}{3}$.

2. Solve the equation: $\dfrac{x+2}{3} = \dfrac{2}{x+3}$.

3. What are the similarities and differences between the equations in problems 1 and 2?

4. Perform the indicated operations:

a. $\dfrac{2}{3} + \dfrac{5}{6}$

b. $\dfrac{2}{3} - \dfrac{5}{6}$

c. $\dfrac{2}{3} \cdot \dfrac{5}{6}$

d. $\dfrac{2}{3} \div \dfrac{5}{6}$

e. $\dfrac{x+2}{3} + \dfrac{5x}{6}$

f. $\dfrac{x+2}{3} \cdot \dfrac{5x}{6}$

5. Find $f(-3)$ and $f(0)$ if $f(x) = x^2 - 4x + 7$. Check your answer using graphing technology and explain how you know you did or didn't correctly find $f(-3)$ and $f(0)$.

6. Write the equation of a line that contains the points $g(0) = 4$ and $g(2) = 0$. What are the x and y intercepts of the $g(x)$.

7. Solve the equation: $\dfrac{x+4}{5} = \dfrac{x+2}{x-2}$.

8. If a quadratic function has factors of $x+7$ and $2x-3$, then write the equation in standard form($ax^2 + bx + c$). What are the zeros of the function?

9. Solve the equation: $4 + 7(x-3) = 4(x+3) - (x+8)$

10. What are the factors of $g(x)$ and $m(x)$?

    a. $g(x) = x^2 - 6x$ b. $m(x) = x^2 - 36$