

Math 1050 A 5.3 Partial Fractions	Name
Find the partial fraction decomposition of the rational function.	
1. $\frac{7x-3}{x(x+3)(x-1)}$	2. $\frac{9x^2-9x+6}{(x-2)(x+2)(2x-1)}$
3. $\frac{x-3}{x^2(x+3)}$	4. $\frac{3x^2+5x-13}{(3x+2)(x-2)^2}$

5. $\frac{8x^2+44x-4}{(x-3)(x+2)(x+5)}$

6. $\frac{-x^2-5x+28}{(x+1)(x-3)^2}$

7. Find the solutions:

$$x + 3y - z = 0$$

$$2x + 4z = 4$$

$$4x + 6y = 4$$

If Infinite solutions, write equations for each variable.

8. A researcher performs an experiment to test the hypothesis that involves the nutrient niacin and retinol. She feeds one group of laboratory rats a daily diet of precisely 32 units niacin and 22,000 units of retinol. She uses 2 types of commercial pellet foods. Food A contains 0.12 unit of niacin and 100 units of retinol per gram. Food B contains 0.20 unit of niacin and 50 units of retinol per gram. How many grams of each food does she feed this group of rats each day?

9. Find the following for

$$f(x) = \frac{3x^2+6x}{x^2-x-2}, \text{ then graph.}$$

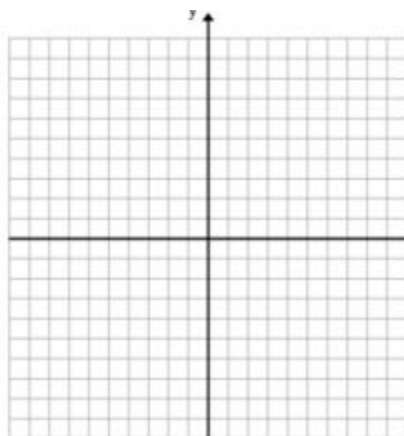
x-int

y-int

VA

HA

Slant



10. A grey squirrel population was introduced in a certain county of GReat Britain 30 years ago. Biologists observe that the population doubles every six years, and now the population is 100,000.

a) What was the initial size of the squirrel population?

b) Estimate the squirrel population 10 years from now?

11. Solve the system:

$$x + 2y = 4$$

$$5x - y = -13$$