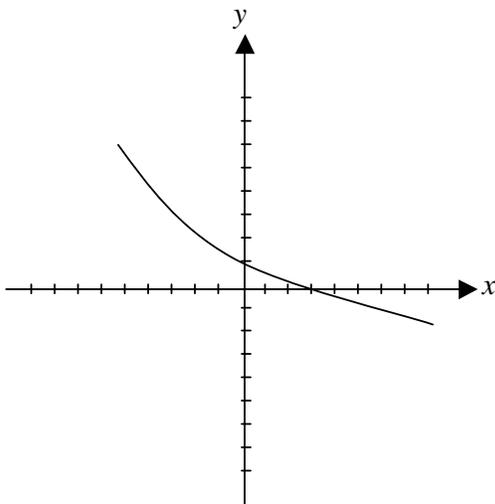


Name: _____

Place your answer in the spaces provided. You must show your work to receive credit.

(6 pts) 1. Find the range of this function.



$[-2, 6]$

(8 pts) 2 Let $g(x) = \frac{2x+5}{x-4}$ Find $g(x+1)$.

$$\frac{2x+7}{x-3}$$

(8 pts) 3. The weight, in pounds, of the average male baby is given by the function $W(t) = 1.2t + 7.5$ where t is the age in months.

(4 pts) (a) What does the number 7.5 signify? (Write your answer as a complete sentence.)

The number 7.5 signifies the weight at birth or zero months.

(4 pts) (b) What does the number 1.2 signify? (Write your answer as a complete sentence.)

The number 1.2 signifies an increase in weight of 1.2 pounds per month.

Name: _____

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(6 pts) 4. Find the x -intercept for $3x + 12 = 4y$.

$$(-4, 0)$$

(8 pts) 5. Find the slope-intercept form of the line that contains the point $(2, 6)$ and has slope

$$m = \frac{1}{3}.$$

$$y = \frac{1}{3}x + \frac{16}{3}$$

(12 pts) 6. Lauren's cell phone bill was \$25.00 for a month in which she used 30 minutes of
airtime. The bill was \$35.00 when she used 50 minutes.(8 pts) (a) Find a linear function that expresses the monthly cost as a function of the number
of minutes. (Name the variables and write the function.)

$$C = .50x + 10.00$$

(4 pts) (b) Use your function from part (a) to determine the monthly cost when 45 minutes
of airtime are used.

$$\$ 32.50$$

Name: _____

Place your answer in the spaces provided. You must show your work to receive credit.

(10 pts) 7. Let $f(x) = x^2 + 1$ and $g(x) = 2x - 5$.(5 pts) (a) Find $f\left(\frac{1}{2}\right)/g\left(\frac{1}{2}\right)$.

$$-\frac{5}{16}$$

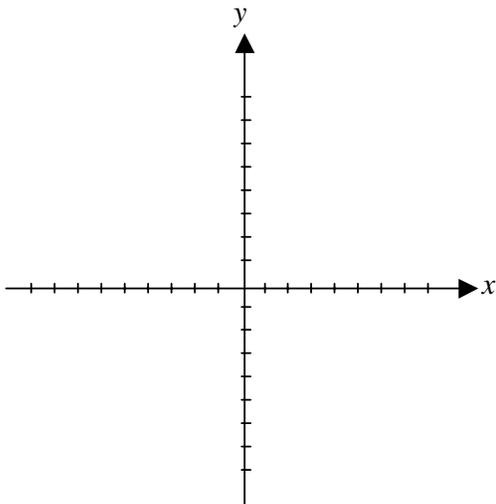
(5 pts) (b) Find $(f + g)(-3)$.

$$-1$$

(12 pts) 8. Graph the following equations. Use your graphs to find the solution of the system.
Write your solution in the form of an ordered pair(s).

$$y = -3$$

$$x + y = 4$$



$$(7, -3)$$

Name: _____

Place your answer in the spaces provided. You must show your work to receive credit.

(8 pts) **9.** Find the slope of any line perpendicular to $8y - 2x = 5$.

$$-4 \text{ or } -\frac{4}{1}$$

(10 pts) **10.** Solve using the substitution method. Express your answer as an ordered pair.

$$a = 4b + 1$$

$$3a + 2b = 10$$

$$\left(3, \frac{1}{2}\right)$$

(12 pts) **11.** On Saturday night, 480 people attended the senior class play. Tickets were \$3 for the general public and \$2 for students. If \$1140 was taken in by the box office that night, how many of each kind of ticket were sold? (Name the variables, set up equation(s), and solve.)

$$\text{student} = 300$$

$$\text{general} = 180$$