Exam 2

Name: _____

Circle your answer for problems 1-3. You must show correct work to receive credit.

(8 pts) 1. Find the distance between the points (2,3) and (-4,1). Simplify your answer.

- *A*. 8
- *B*. **√**10
- *C*. 6
- D. **√**5

E. None of the abov

(8 pts) 2. Solve the following inequality.

$$\frac{2}{9}x - \frac{4}{3} > \frac{5}{6}x - 1$$

A.
$$x > -\frac{6}{11}$$

B. $x > -\frac{11}{6}$
C. $x < -\frac{6}{11}$
D. $x < -\frac{11}{6}$

E. None of the abov

(8 pts) 3. Subtract and simplify completely.

$$\frac{7}{2a-1} - \frac{3}{a}$$

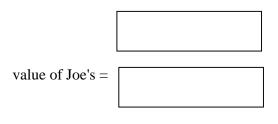
Name: _____

A. $\frac{a+3}{a(2a-1)}$ B. $\frac{4}{a-1}$ C. $\frac{a-1}{a(2a-1)}$ D. $\frac{4}{2a-1}$ E. $\frac{a-3}{a(2a-1)}$

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

Exam 2

(10 pts) 4. The value of Joe's card collection is \$50 more than three times the value of Rick's collection. If the combined value is \$3700, what is the value of each person's collection? (Name the variable(s), set up an equation(s), and solve.) There is no credit for guessing.



value of Rick's =

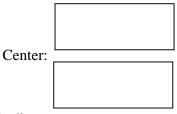
(8 pts) 5. Multiply and simplify completely.

$$\frac{x+3}{x^2-5x} \frac{2x^3-x^2}{2x^2+5x-3}$$

Name: _

(10 pts) 6. Find the center and the radius of the circle given by the following equation. Hint: standard equation of a circle is $(x - h)^2 + (y - k)^2 = r^2$.

$$x^2 + y^2 + 10x - 14y - 7 = 0$$



Radius =

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

(16 pts) 7. Solve for x. Simplify your answer(s) completely. (Do not use decimals.)

(8 pts) (a) $(x-3)^2 = 16$

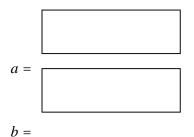
x =

(8 pts) (b) $2x^2 - 6x + 3 = 0$

Name:

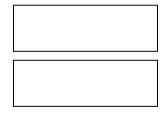
(10 pts) 8. Solve the following system of equations:

3a - 4b = 4a - 6b = -1



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

(12 pts) 9. Sean has \$70,000 to invest for one year. Part of the money will be invested in certificates of deposits (CD's) which pay 8% simple interest. The remaining amount will be invested in noninsured bonds paying 12% simple interest. How much should he invest in each in order to earn \$6300 for one year in total interest? (Name the variable(s), set up an equation(s), and solve.)



amount in CD's =

amount in bonds =

(10 pts) 10. The sidewalk around a rectangular garden is 4 feet wide and has an area of 574 square fact. If the length of the corden is twice the width find the width of the corden. (Label Name:

