

Period: _____

Name: _____

Chapter 4 Assignment – Systems of Equations

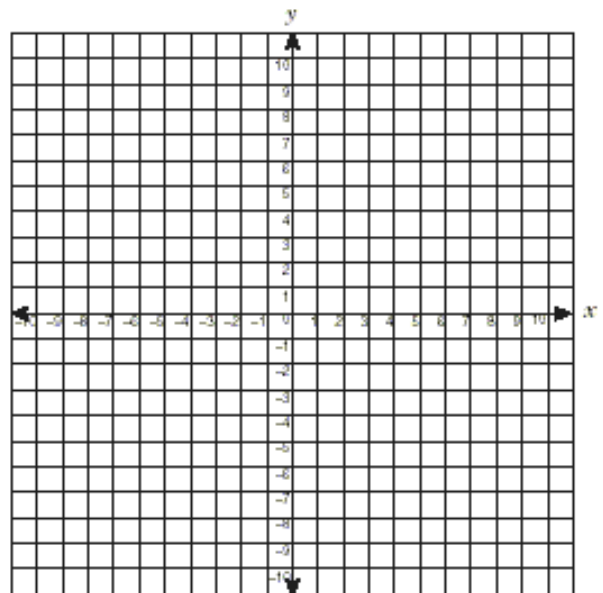
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Show all of your work.

1) Is $(5, -9)$ a solution to the system $2x + y = 1$ and $x^2 + y = 14$ (1 mark)?

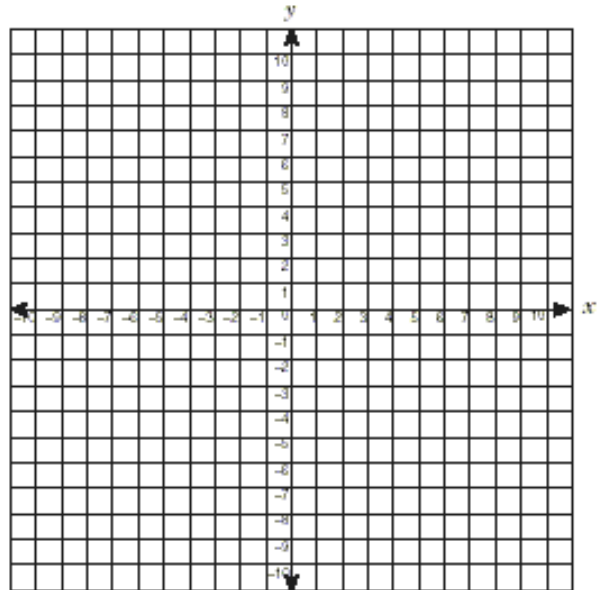
ANSWER:

2) Solve the system by graphing (3 marks): $y = x^2 - 4x + 5$ and $x - y = 1$



ANSWER(S):

3) Solve the system by graphing (4 marks): $y = x^2 - 4x + 1$ and $y = -\frac{1}{2}(x - 2)^2 + 3$



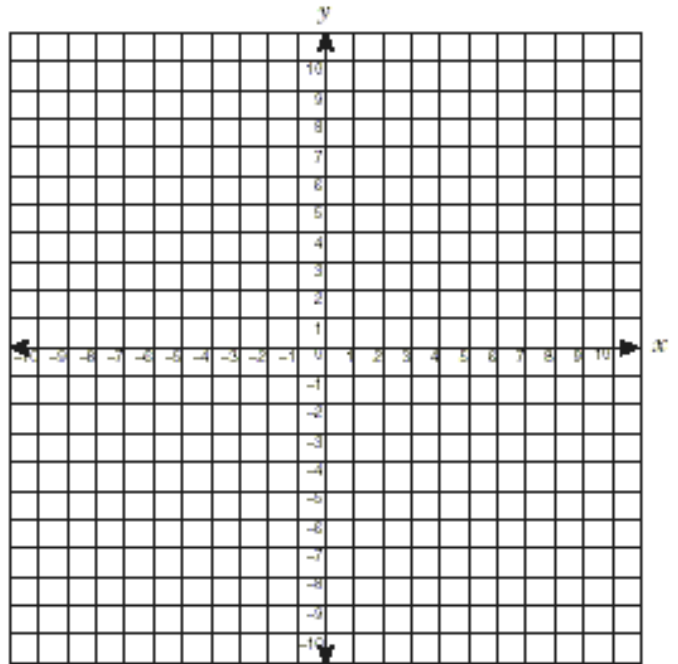
ANSWER(S):

4) Solve the system by substitution OR elimination (3 marks):

$$5x^2 + y = 6 + 3x \quad \text{and} \quad 7x + y = -9$$

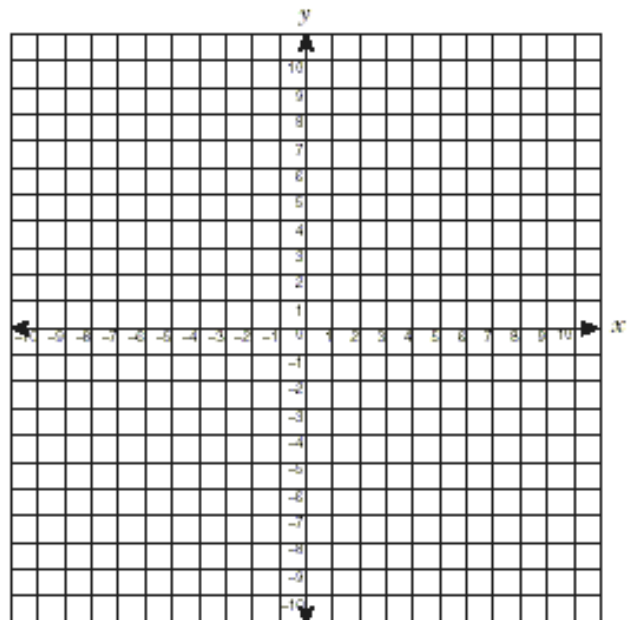
ANSWER(S):

5) Graph the system of inequalities (4 marks): $y \geq x^2 - 2x - 6$ and $y \leq 2x - 3$



6) Solve $x^2 \geq 4x + 45$ (2.5 marks). Graph the solution on a number line (0.5 marks).

(hint: look at 4.4B notes!) you can use TEST INTERVALS or THE GRAPH PROVIDED

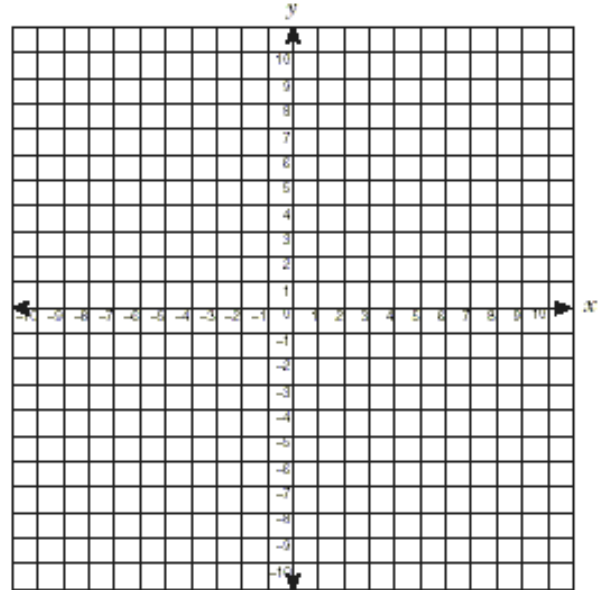


ANSWER:

NUMBER LINE:

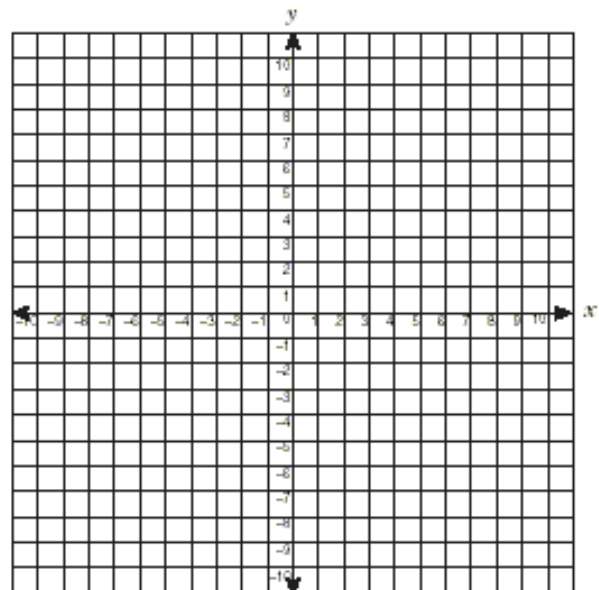
7) Solve the inequality by graphing (3 marks): $y < x^2 - 6x + 1$

(hint: the **solution** to this is the correct boundary and shading!)

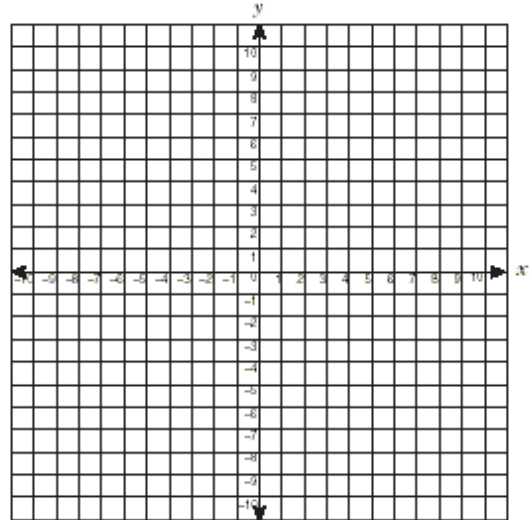


8) Solve the inequality by graphing (3 marks): $y \leq -\frac{1}{2}x^2 + 2x + 3$

(hint: the **solution** to this is the correct boundary and shading!)



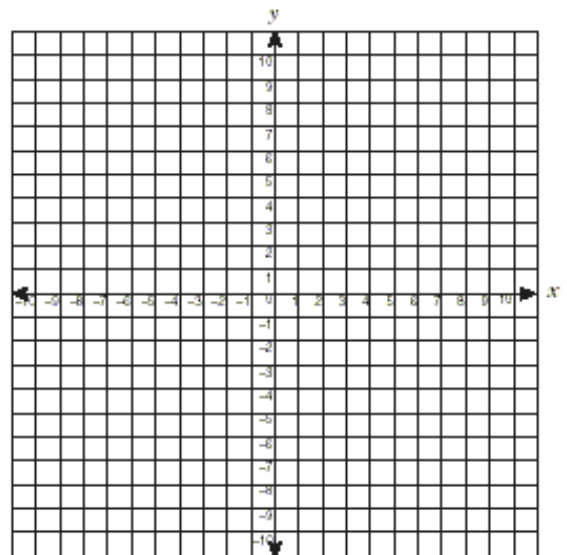
9) A baseball player hits a fly ball with trajectory $d = 64t - 16t^2$, with d , the distance above ground in feet at time t , in seconds. During what time interval is the ball above 48 feet in the air? (3 marks) *you can use TEST INTERVALS or THE GRAPH PROVIDED*



SENTENCE ANSWER:

10) The length of a rectangle is 1cm more than twice the width. If the area of the rectangle is AT LEAST 36cm^2 , what are its possible widths? (3 marks)

you can use TEST INTERVALS or THE GRAPH PROVIDED



SENTENCE ANSWER: