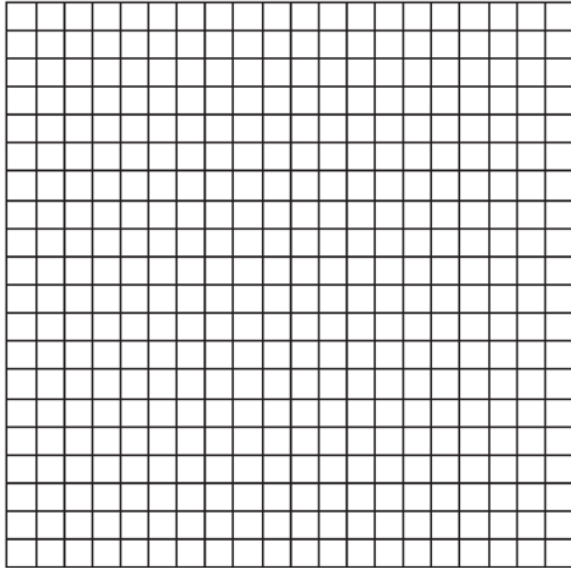


**A2.A.3: Quadratic-Linear Systems 2: Solve systems of equations involving one linear equation and one quadratic equation algebraically**

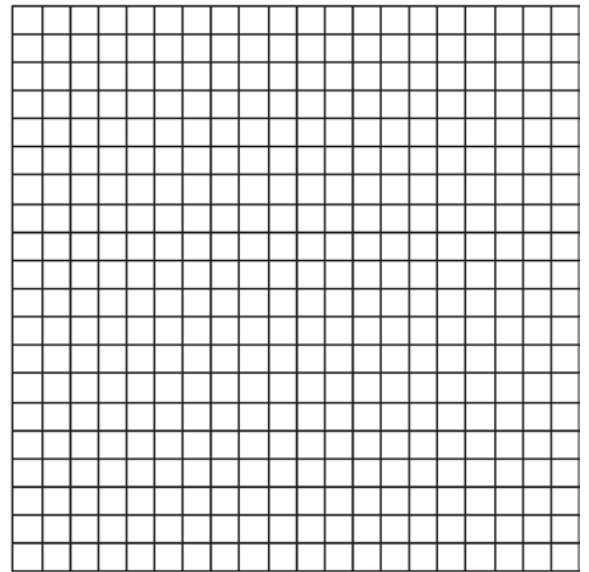
- 1 Solve the following system of equations algebraically or graphically:  $x^2 + y^2 = 25$

$$3y - 4x = 0$$

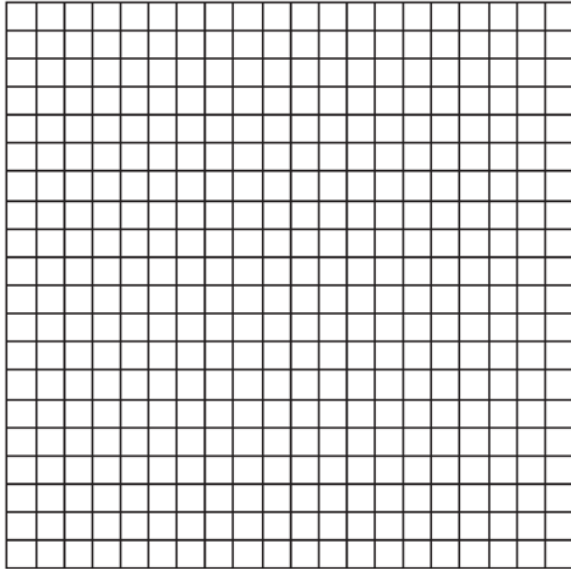
[The use of the accompanying grid is optional.]



- 2 A pelican flying in the air over water drops a crab from a height of 30 feet. The distance the crab is from the water as it falls can be represented by the function  $h(t) = -16t^2 + 30$ , where  $t$  is time, in seconds. To catch the crab as it falls, a gull flies along a path represented by the function  $g(t) = -8t + 15$ . Can the gull catch the crab before the crab hits the water? Justify your answer. [The use of the accompanying grid is optional.]

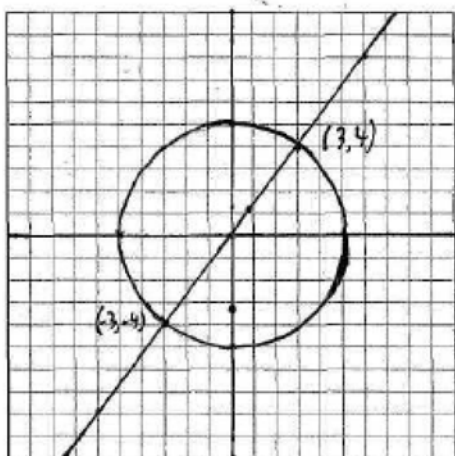


- 3 The price of a stock,  $A(x)$ , over a 12-month period decreased and then increased according to the equation  $A(x) = 0.75x^2 - 6x + 20$ , where  $x$  equals the number of months. The price of another stock,  $B(x)$ , increased according to the equation  $B(x) = 2.75x + 1.50$  over the same 12-month period. Graph and label both equations on the accompanying grid. State all prices, to the *nearest dollar*, when both stock values were the same.



**A2.A.3: Quadratic-Linear Systems 2: Solve systems of equations involving one linear equation and one quadratic equation algebraically**  
**Answer Section**

1 ANS:



PTS: 4

REF: 060439a

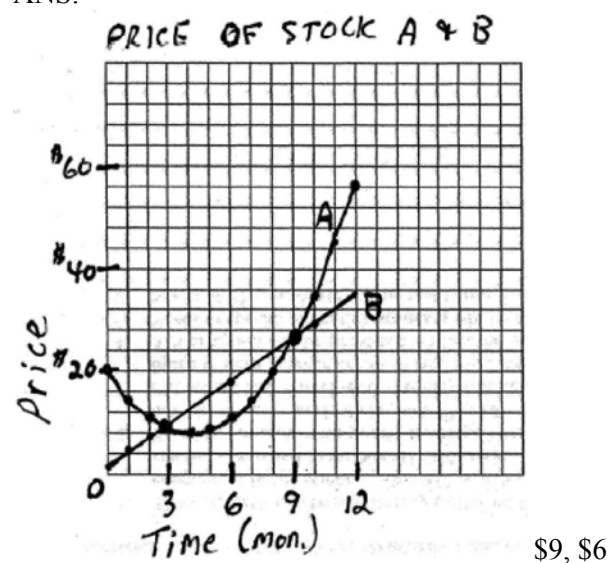
2 ANS:

Yes

PTS: 4

REF: 060228b

3 ANS:



PTS: 4

REF: 060328b