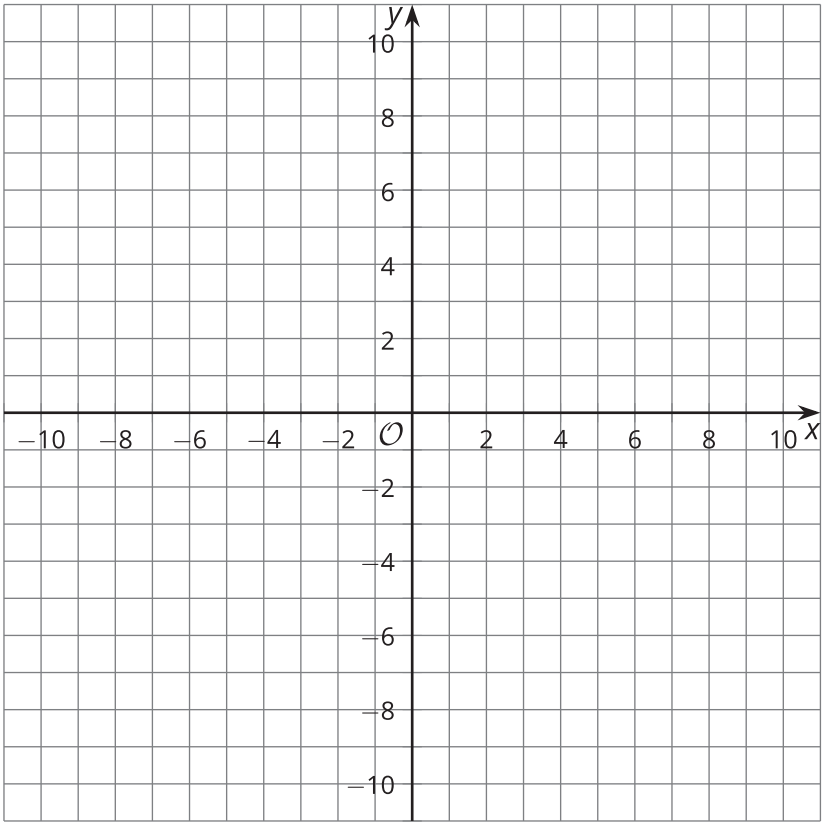
Lesson 13 Practice Problems

1. Graph the equations $(x-2)^2+(y+3)^2=36$ and $x=2$. Where do they intersect?



2. Select **all** equations for which the point $(2, -3)$ is on the graph of the equation.

A. $y-3=x-2$

B. $4x+y=5$

C. $y=5x-13$

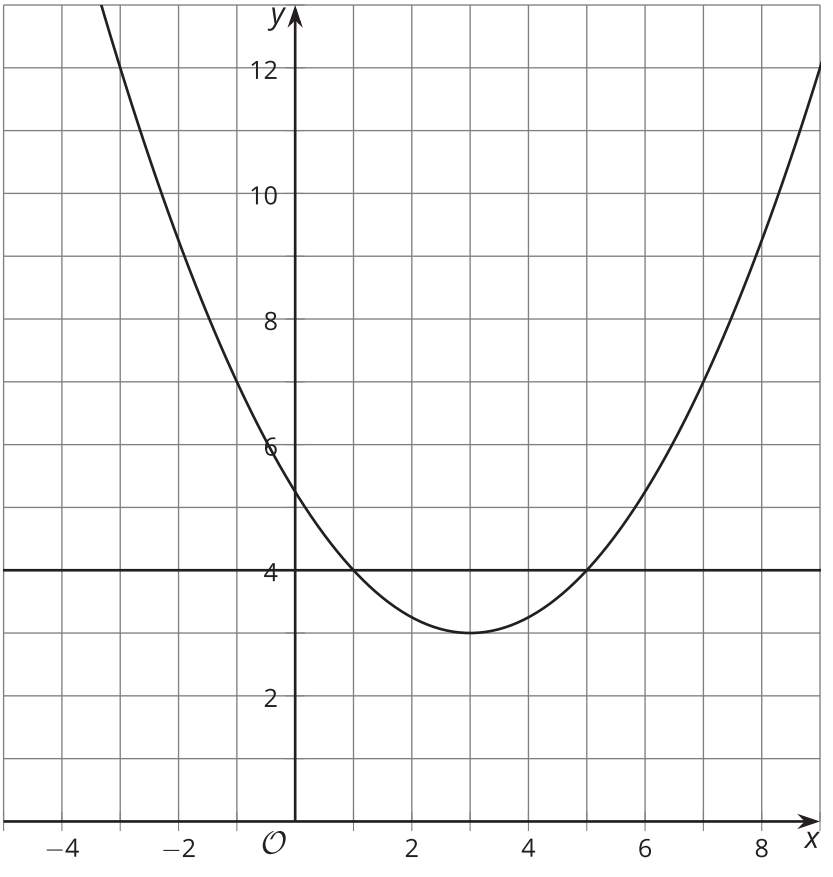
D. $x^2+y^2=13$

E. $(x-2)^2+(y-(-3))^2=25$

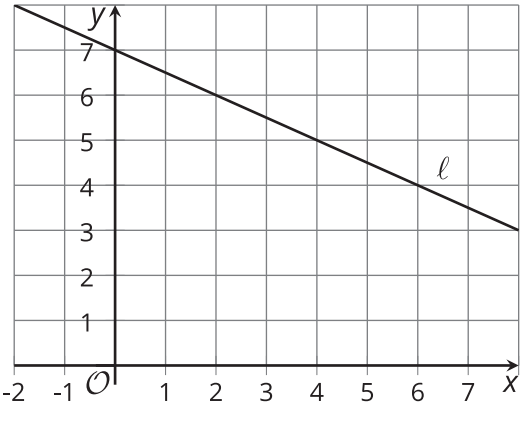
F. $y=(x-2)^2+3$

G. $y=x^2-7$

3. The image shows a graph of the parabola with focus $(3, 4)$ and directrix $y = 2$, and the line given by $y = 4$. Find and verify the points where the parabola and the line intersect.



4. Here is a line ℓ. Write equations for and graph 4 different lines perpendicular to ℓ .



(From Unit 6, Lesson 12.)

5. Write an equation whose graph is a line perpendicular to the graph of $y = 4$ and which passes through the point $(2, 5)$.

(From Unit 6, Lesson 12.)

6. Select **all** lines that are perpendicular to $y - 4 = -\frac{2}{3}(x + 1)$.

A. $y = \frac{3}{2}x + 8$

B. $3x - 2y = 2$

C. $3x + 2y = 10$

D. $y - 2 = -\frac{2}{3}(x - 1)$

E. $y = \frac{3}{2}x$

(From Unit 6, Lesson 11.)

7. Select the line parallel to $3x - 2y = 10$.

A. $y - 1 = \frac{3}{2}(x + 6)$

B. $6x + 4y = -20$

C. $y = -\frac{3}{2}x + 2$

D. $y - 4 = \frac{2}{3}(x + 1)$

(From Unit 6, Lesson 10.)

8. Explain how you could tell whether $x^2 + bx + c$ is a perfect square trinomial.

(From Unit 6, Lesson 5.)