### Lesson 13 Practice Problems

1. Graph the equations $\left(x−2\right)^{2}+\left(y+3\right)^{2}=36$ and $x=2$. Where do they intersect?
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1. Select **all** equations for which the point $\left(2,-3\right)$ is on the graph of the equation.
	1. $y−3=x−2$
	2. $4x+y=5$
	3. $y=5x−13$
	4. $x^{2}+y^{2}=13$
	5. $\left(x−2\right)^{2}+\left(y−\left(-3\right)\right)^{2}=25$
	6. $y=\left(x−2\right)^{2}+3$
	7. $y=x^{2}−7$
2. The image shows a graph of the parabola with focus $\left(3,4\right)$ and directrix $y=2$, and the line given by $y=4$. Find and verify the points where the parabola and the line intersect.
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1. Here is a line $ℓ$. Write equations for and graph 4 different lines perpendicular to $ℓ$ .
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* (From Unit 6, Lesson 12.)
1. Write an equation whose graph is a line perpendicular to the graph of $y=4$ and which passes through the point $\left(2,5\right)$.
* (From Unit 6, Lesson 12.)
1. Select **all** lines that are perpendicular to $y−4=-\frac{2}{3}\left(x+1\right)$.
	1. $y=\frac{3}{2}x+8$
	2. $3x−2y=2$
	3. $3x+2y=10$
	4. $y−2=-\frac{2}{3}\left(x−1\right)$
	5. $y=\frac{3}{2}x$
* (From Unit 6, Lesson 11.)
1. Select the line parallel to $3x−2y=10$.
	1. $y−1=\frac{3}{2}\left(x+6\right)$
	2. $6x+4y=-20$
	3. $y=-\frac{3}{2}x+2$
	4. $y−4=\frac{2}{3}\left(x+1\right)$
* (From Unit 6, Lesson 10.)
1. Explain how you could tell whether $x^{2}+bx+c$ is a perfect square trinomial.
* (From Unit 6, Lesson 5.)



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