### Lesson 11 Practice Problems

1. Write an equation for a line that passes through the origin and is perpendicular to $y=5x−2$.
2. Match each line with a perpendicular line.
	1. $y=5x+2$
	2. $y−2.25=-2(x−2)$
	3. the line through $(-1,5)$ and $(1,9)$
	4. the line through $(2,12)$ and $(17,9)$
	5. $y=-\frac{1}{2}x+5$
	6. $2x−4y=10$
3. The  rule $(x,y)\rightarrow (y,-x)$ takes a line to a perpendicular line. Select **all** the rules that take a line to a perpendicular line.
	1. $(x,y)\rightarrow (2y,-x)$
	2. $(x,y)\rightarrow (-y,-x)$
	3. $(x,y)\rightarrow (-y,x)$
	4. $(x,y)\rightarrow (0.5y,-2x)$
	5. $(x,y)\rightarrow (4y,-4x)$
	6. Write an equation of the line with $x$-intercept $(3,0)$ and $y$-intercept $(0,-4)$.
	7. Write an equation of a line parallel to the line $y−5=\frac{4}{3}(x−2)$.
* (From Unit 6, Lesson 10.)
1. Lines $ℓ$ and $p$ are parallel. Select **all** true statements.
* 
	1. Triangle $ADB$ is similar to triangle $CEF$.
	2. Triangle $ADB$ is congruent to triangle $CEF$.
	3. The slope of line $ℓ$ is equal to the slope of line $p$.
	4. $sin(A)=sin(C)$
	5. $sin(B)=cos(C)$
* (From Unit 6, Lesson 10.)
1. Select the equation that states $(x,y)$ is the same distance from $(0,5)$ as it is from the line $y=-3$.
	1. $x^{2}+(y+5)^{2}=(y+3)^{2}$
	2. $x^{2}+(y−5)^{2}=(y+3)^{2}$
	3. $x^{2}+(y+5)^{2}=(y−3)^{2}$
	4. $x^{2}+(y−5)^{2}=(y−3)^{2}$
* (From Unit 6, Lesson 8.)
1. Select **all** equations that represent the graph shown.
* 
	1. $y=-x+2$
	2. $(y−3)=-(x+1)$
	3. $(y−3)=-x−1$
	4. $(y−3)=(x−1)$
	5. $(y+1)=-(x−3)$
* (From Unit 6, Lesson 9.)
1. Write a rule that describes this transformation.

|  |  |
| --- | --- |
| * original figure
 | * image
 |
| * $(3,2)$
 | * $(6,4)$
 |
| * $(4,-1)$
 | * $(8,-2)$
 |
| * $(5,1)$
 | * $(10,2)$
 |
| * $(7,3)$
 | * $(14,6)$
 |

* (From Unit 6, Lesson 3.)



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