Practice Set 3.5

Use the choices to fill in each blank.

	perpendicular parallel	point-slo slope-int	pe ercept	point-intercept horizontal		vertical oblique	
1.	The equation $y - y_1 = m(x - x_1)$ is called the						
2.	If two lines have the same slope they are						
3.	If two lines have slopes that are negative reciprocals then they are						
4.	A horizontal line is perpendicular to a(n)				line.		
Write an equation in slope-intercept form for each line described.							
5.	m = 3 through $(1, 2)$	6.	m = -2 through	n (1, 3)	5		
					6		
7.	$m = -\frac{3}{4} \text{ through } (-4, 5)$	8.	$m = \frac{1}{3}$ through	n (3, -4)	7		
					8		
Two	points on each line, l_1 and	<i>b</i> are giv	en Determine	if the lines are par	allel nern	endicular or neither	
	l_1 : (1, 1) and (2, 2)	10.	$l_1: (-2, 4)$ and	(-3, -1)			
	<i>l</i> ₂ : (3, 5) and (4, 6)		l_2 : (3, -1) and	(2, -4)	10		
11.	<i>l</i> ₁ : (8, 1) and (5, 6) <i>l</i> ₂ : (4, 2) and (1, 7)	12.	l_1 : (3, -5) and l_2 : (4, 3) and (11		
					12		
Determine whether the two equations represent lines that are parallel, perpendicular, or neither.							
13.	-		4x + 3y = 5		13		
	$y = -\frac{1}{3}x - 2$		$y = -\frac{4}{3}x + 7$		14		
15.	2x - y = 5 $x + 2y = 7$	16	x = 2y + 6 $y = 3x - 5$		15		
		10.					
					16		

Practice Set 3.5

Writ	e an equation in slope-intercept form for each line described.					
17.	Through (5, 3) and parallel to the graph of $y = 3x - 1$	17				
18.	Through (-2, 3) and perpendicular to the graph of $2x + 3y = 5$	18				
19.	With <i>x</i> -intercept $(-4, 0)$ and <i>y</i> -intercept $(0, -3)$	19				
20.	Through $(-7, 5)$ and perpendicular to the line with <i>x</i> -intercept $(1, 0)$ and <i>y</i> -intercept $(0, 7)$	20				
21.	Through $(4, 3)$ and parallel to the line through the $(0, 1)$ and $(2, -3)$	21				
22.	Through the point (2, 3) and parallel to the <i>x</i> -axis	22				
Prol 23.	Problem Solving23. The number of homeschooled U.S. children is on the rise. 23. a)					

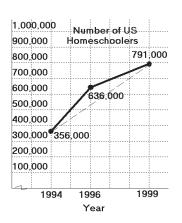
23. The number of homeschooled U.S. children is on the rise. The dashed line is a linear function drawn to approximate the data.

a) Write an equation in slope-intercept form of the dashed line.

b) Use the equation from part a) to estimate the number of homeschoolers in 2010.

Year	Number of US			
	Homeschooled			
	Children			
1994	356,000			
1996	636,000			
1999	791,000			
[Source: U.S. Census				

[Source. 0.5. Census Bureau]



b)_