1	**2**
Emma started the day with an irrigation pipe 120 feet long. She used the equation $L = 15s + 120$ to determine the total length of the pipe as new sections of pipe, s, were welded on to the end. • What is the slope of the line? • What does the slope represent in the context of the problem? • Write an equation that is parallel to this equation.	Ed had a well on his property 200 feet deep. When the well went dry, he hired a company to drill the well deeper. He used the equation $d = -75t - 200$ to find the depth of the well, d, using the number of days the company drilled, t. • What is the slope of the line? • What does the slope represent in the context of the problem? • Write an equation that is perpendicular.
3	**4**
It costs General Motors $500,000 to outfit their new car line. The company used the equation $p = 2500c - 500,000$ to determine the amount of profit, p, earned from the sale of cars, c. • What is the slope of the line? • What does the slope represent in the context of the problem? • Write an equation that is parallel.	Christopher had $125 in his savings account to buy a used car. He used the equation $A = 50w + 125$ to determine the amount in his savings, A, after depositing the same amount in his account every week, w. • What is the slope of the line? • What does the slope represent in the context of the problem? • Write an equation that is perpendicular.
5	**6**
Pierce the plumber charges $25 for a service call. He use the equation $C = 50h + 25$ to determine the charge of his services, C, after working h hours. • What is the slope of the line? • What does the slope represent in the context of the problem? • If he works 50 hours in a week, how much will he make?	Jeff the plumber charges $65 per hour to fix your plumbing. He uses the equation $C = 65h + 100$ to determine the charge of his services, C, after working h hours. • What is the y-intercept? • What does it represent in the context of the problem? • How many hours must he work to make at least $500?
7	**8**
Kristina is running the freshman class fundraiser. They are selling donuts as a fundraiser. The amount of money they make is computed using the function $y = 2x - 100$, where x represents the number of donuts sold. • What does the number 100 mean in the context of this problem? • How many donuts must they sell to make $3000? • Write an equation that is parallel.	Jill's parents are saving to buy a new car for her 16th birthday. The function $y = 125x + 3200$ represents the relationship between the number of months her parents have been saving and the amount in their account. • What does the number 3200 represent in the context of the problem? • How many months must they save to afford a $50,000 car? • Write an equation that is perpendicular.

9	10
Laura lights a candle in her kitchen. The height of the candle is represented by the equation $y = -\frac{1}{2}x + 6$, where x is the time in hours the candle has been burning and y is the height of the candle in inches. • What was the height of the candle before Laura lit it? • Why is the slope negative in this equation?	Elizabeth has been paying her credit card bill since January 1st. The equation $B = -100m + 675$ represents the relationship between the time she has been paying, m, and the amount of her credit card bill, B. • How much money did Elizabeth owe at the beginning of the year? • How many months will it take her to pay off her bill?
11	**12**
Anna joins a CD club. She pays $15 for the membership and $6 for each CD that she buys. Write an equation in slope-intercept form that models the relationship between the cost Aminata pays, y, and the number of CDs Aminata buys, x. • Write an equation that is perpendicular	Kayla has $1500 in her bank account. She spends $150 each week. Write an equation that represents the relationship between the amount in Kayla's bank account, A, and the number of weeks she has been spending, w. • Write an equation that is parallel.
13	**14**
Tim is draining his pool for the winter. There are 240 gallons in the pool and it is decreasing at a rate of 20 gallons per hour. Write an equation to represent the relationship between the amount of water in the pool, y, and the number of hours the pool has been draining, x. • Write an equation that is parallel.	Airport DVD rentals is offering a new special for the busy holiday travel season. You can rent a portable DVD player and DVDs to take on your flight. <table><tr><td># of DVDs Rented</td><td>Total Cost</td></tr><tr><td>1</td><td>19</td></tr><tr><td>4</td><td>31</td></tr></table> Write an equation to represent the relationship between the number of DVDs rented, d, and the total cost, c.
15	**16**
Grandma is planning Thanksgiving dinner. The number of pounds of turkey she will buy depends on the number of people she invites to dinner. <table><tr><td># of People Invited</td><td>Pounds of Turkey</td></tr><tr><td>12</td><td>9</td></tr><tr><td>20</td><td>15</td></tr></table> Write an equation to represent the relationship between the number of people invited, x, and the number of pounds of turkey needed, y.	Kyle is training for a marathon. The equation $y = 3x + 5.5$ represents the number of miles Kyle can run over time, where y is the number of miles Kyle runs and x is the number of weeks Kyle has been training. • How long will it take Kyle to be ready to run the entire marathon of 26.5 miles?

17	18
Priscilla begins working at Macy's. She will be paid a daily amount plus a commission of her total sales. The equation $y = .10x + 15$ represents the amount Priscilla will make based on her total sales, where y is the amount of money Priscilla makes in one day and x is her total sales. • How much will Priscilla make if she sells $650? • Write an equation that is perpendicular	David works at the T-shirt Shack selling tees. The equation $y = 15x - 520$ represents the profit that the T-shirt Shack makes for each t-shirt sold, where y is the total profit and x is the number of t-shirts sold. • How many t-shirts do they need to sell to make a profit of $140? • What does the y-intercept represent for this problem?
19	**20**
Alejandra paints faces at kids' birthday parties to earn extra money. The equation $M = 2.50f + 12$ represents the relationship between the money she makes, M, and the number of faces she paints, f. • Alejandra wants to buy a new pair of boots that cost $119.50. How many faces does she need to paint? • Write an equation that is parallel.	Steven is learning to scuba dive. The equation $D = 20L + 15$ represents the depth he can dive in feet, D, based on the number of lessons he has had, L. • How deep can Steven dive after he takes 13 lessons? • What does the y-intercept represent in this context?