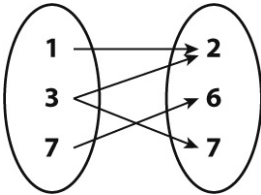
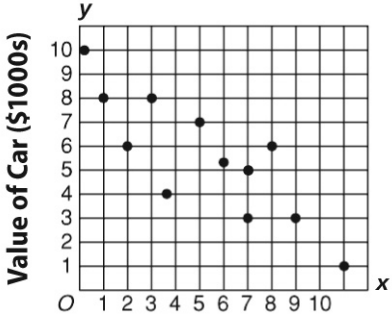
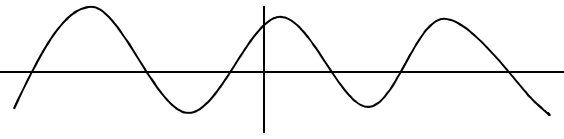
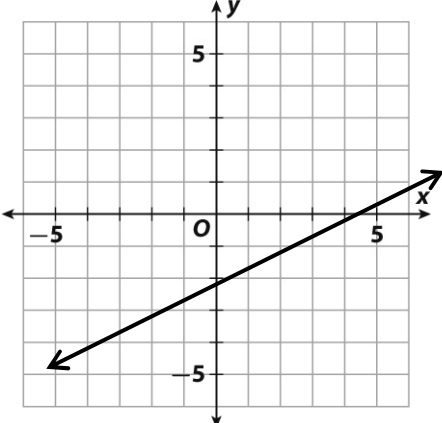
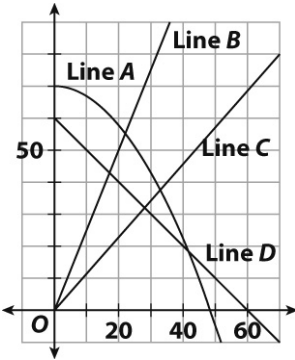
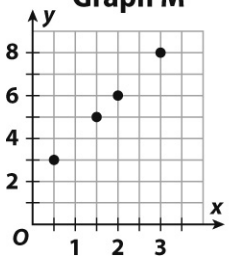
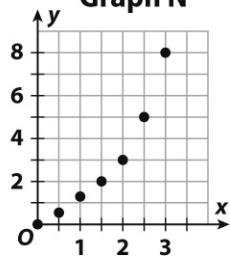


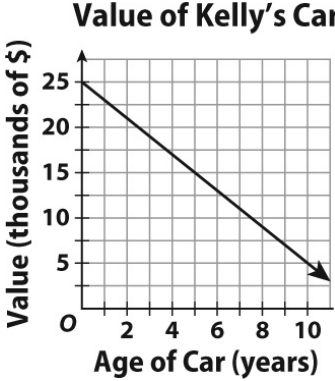
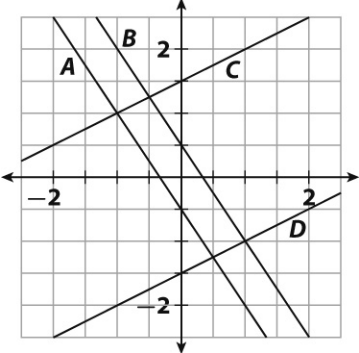
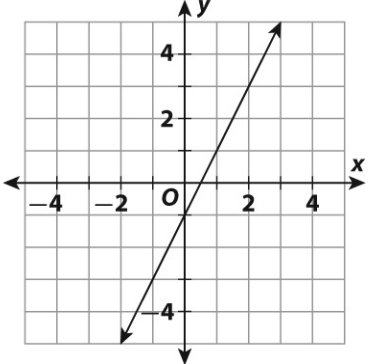
For full credit, show all work.

1.	<p>For the situation described, first write an equation in the form $y = mx + b$. Then solve the problem.</p> <p>A sales associate is given a \$500 hiring bonus with a new job. She earns an average commission of \$250 per week. How much does she earn if she works for 12 weeks?</p>	$y = 250x + 500$												
		\$3500												
2.	<p>Mr. Mangham is at Home Depot looking at two new rugs for his classroom. The cost of all the rugs in the store is a linear relationship.</p> <table border="1" data-bbox="240 611 1260 684"> <tbody> <tr> <td>200 square feet - \$56</td> <td>300 square feet - \$90</td> </tr> </tbody> </table> <p>Write an equation in slope-intercept form for the cost of rugs at Home Depot.</p>	200 square feet - \$56	300 square feet - \$90	$y = 0.34x - 12$										
200 square feet - \$56	300 square feet - \$90													
3.	<p>Write an equation in the form $y = mx + b$ for the table below.</p> <table border="1" data-bbox="431 873 1065 978"> <tbody> <tr> <td>Months (x)</td> <td>2</td> <td>6</td> <td>12</td> </tr> <tr> <td>Account Balance (y)</td> <td>\$300</td> <td>\$600</td> <td>\$1,050</td> </tr> </tbody> </table>	Months (x)	2	6	12	Account Balance (y)	\$300	\$600	\$1,050	$y = 75x + 150$				
Months (x)	2	6	12											
Account Balance (y)	\$300	\$600	\$1,050											
4.	<p>Complete the table to model the linear relationship. Then write an equation in slope-intercept form for the relationship.</p> <p>A bowling alley charges \$3.00 to rent shoes and \$1.50 per each game bowled.</p> <table border="1" data-bbox="375 1192 1122 1297"> <tbody> <tr> <td>Games Bowled</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>Total Cost</td> <td>\$4.50</td> <td>\$6.00</td> <td>\$7.50</td> <td>\$9.00</td> </tr> </tbody> </table>	Games Bowled	1	2	3	4	Total Cost	\$4.50	\$6.00	\$7.50	\$9.00	$y = 1.5x + 3$		
Games Bowled	1	2	3	4										
Total Cost	\$4.50	\$6.00	\$7.50	\$9.00										
5.	<p>The table shows the linear relationship of how the number of months of membership at two gyms relates to the total cost of the membership, including the membership fee.</p> <table border="1" data-bbox="240 1482 1260 1633"> <thead> <tr> <th>Months</th> <th>Cost at Gym A</th> <th>Cost at Gym B</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>\$70</td> <td>\$55</td> </tr> <tr> <td>2</td> <td>\$90</td> <td>\$80</td> </tr> <tr> <td>3</td> <td>\$110</td> <td>\$105</td> </tr> </tbody> </table> <p>Write an equation in slope-intercept form for the cost at gym A.</p>	Months	Cost at Gym A	Cost at Gym B	1	\$70	\$55	2	\$90	\$80	3	\$110	\$105	$y = 20x + 50$
Months	Cost at Gym A	Cost at Gym B												
1	\$70	\$55												
2	\$90	\$80												
3	\$110	\$105												
6.	<p>Use the table in the previous question to write an equation in slope-intercept form for the total cost at gym B.</p>	$y = 25x + 30$												

7.	In the previous questions, suppose you plan to be a member for 10 months. What is the total cost at each gym and which is the better overall cost?	A: \$250	B: \$280	Gym A								
8.	<p>A ticket agency charges a processing fee for ticket purchases. The following ticket purchases were made for tickets to a concert.</p> <ul style="list-style-type: none"> • William spends \$132 on 4 tickets. • Theo buys 2 tickets for \$72. • The ticket agency charges Ellis \$252 for 8 tickets. <p>Place the information above in the table.</p> <table border="1" data-bbox="483 541 1240 642" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Tickets</td> <td style="text-align: center;">2</td> <td style="text-align: center;">4</td> <td style="text-align: center;">8</td> </tr> <tr> <td style="text-align: center;">Total Cost</td> <td style="text-align: center;">\$72</td> <td style="text-align: center;">\$132</td> <td style="text-align: center;">\$252</td> </tr> </table>	Tickets	2	4	8	Total Cost	\$72	\$132	\$252			
Tickets	2	4	8									
Total Cost	\$72	\$132	\$252									
9.	In the question above, determine whether the relationship between tickets purchased and total cost is linear. If so, write an equation in the form $y = mx + b$.	Yes, linear. $y = 30x + 12$										
10.	In the questions above, find the cost of 7 tickets.	\$222										
11.	<p>Why is this not a function?</p> <div style="text-align: center;">  </div> <p>A 7 is not mapped onto itself. B 3 is mapped onto two different numbers. C The numbers in the ovals are different. D There are not enough numbers to decide if this is a function.</p>	B										
12.	<p>Norma made the graph below to show the relationship between the age and value of 12 cars. Which value, when removed from the graph, would result in the relationship being a function?</p> <div style="text-align: center;">  </div> <p>A (3.5, 4) B (9, 3) C (6, 5.25) D (7, 5)</p>	D										

13.	<p>List all the items below which are functions.</p> <p>A $y = 6x + 3$</p> <p>B $(2,2), (3,1), (-2,-2), (4,1), (3,0)$</p> <p>C </p> <p>D</p> <table border="1" data-bbox="240 457 1079 541"> <thead> <tr> <th>Input</th> <th>3</th> <th>6</th> <th>9</th> <th>3</th> </tr> </thead> <tbody> <tr> <th>Output</th> <td>1</td> <td>8</td> <td>2</td> <td>4</td> </tr> </tbody> </table>	Input	3	6	9	3	Output	1	8	2	4	A, C
Input	3	6	9	3								
Output	1	8	2	4								
14.	<table border="1" data-bbox="516 583 982 777"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>8</td> <td>1</td> </tr> <tr> <td>12</td> <td>3</td> </tr> <tr> <td>18</td> <td>6</td> </tr> <tr> <td>20</td> <td>7</td> </tr> </tbody> </table> <p>Which equation best represents the relationship between x and y in the table above?</p> <p>A $y = 0.5x - 3$ C $x = 2y - 6$</p> <p>B $y = 0.5x - 6$ D $y = 2x - 3$</p>	x	y	8	1	12	3	18	6	20	7	A
x	y											
8	1											
12	3											
18	6											
20	7											
15.	<p>Graph the system of linear equations below on a sheet of <i>graph paper</i>.</p> $y = -4x - 14$ $y = 3x$ <p>Which of the following is the solution to the system of equations?</p> <p>A $(2,6)$ C $(-2,-6)$</p> <p>B $(4,-14)$ D $(4,3)$</p>	C										
16.	<p>Graph the equation $y = \frac{1}{2}x - 2$.</p> 											

17.	 <p>What is the equation for line D?</p> <p>A $y = 10x + 60$ C $y = -1x + 60$ B $y = 60x - 10$ D $y = -10x + 60$</p>	C
18.	<p>Which graph above could not be written as an equation in the form $y = mx + b$?</p> <p>A line A C line C B line B D line D</p>	A
19.	<p>Which graph above shows a linear non-proportional relationship?</p> <p>A line A C line C B line B D line D</p>	D
20.	<p>Which graphs above shows a proportional relationship?</p> <p>A lines A & B C lines B, C, & D B lines B & C D all lines</p>	B
21.	<p>Which statement compares the data on these graphs?</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="511 1239 738 1522"> <p>Graph M</p>  </div> <div data-bbox="755 1239 982 1522"> <p>Graph N</p>  </div> </div> <p>A M is linear. N is not linear. B M is increasing. N is decreasing. C Both have the same y-value for $x = 2$. D Both show proportional relationships.</p>	A

22.	<p>The graph shows the value of Kelly's car in the years after she purchased it.</p> <div style="text-align: center;"> <p>Value of Kelly's Car</p>  </div> <p>What was the value of Kelly's car when she purchased it?</p>	\$25,000
23.	By what amount does the value of Kelly's car decrease every year?	\$2,000
24.	What equation shows the relationship between y , the value of Kelly's car and x , the age of the car in years?	$y = -2000x + 25000$
25.	<p>Which line has a slope of $\frac{1}{2}$ and a negative y-intercept?</p> <div style="text-align: center;">  </div> <p>A line A B line B C line C D line D</p>	D
26.	<p>Find the equation of a line that fits the data shown in the graph below.</p> <div style="text-align: center;">  </div>	$y = 2x - 1$

27.	Kim starts with \$500 and spends \$15 per week. Her brother Roy starts with \$800 and spends \$35 per week. Write a system of equations that represents this situation.	$y = -15x + 500$ $y = -35x + 800$										
28.	Graph the problem above on a sheet of <i>graph paper</i> .											
29.	In the problem above, when does Roy have more than Kim?	$x < 15$ weeks										
30.	In the problem above, what does the intersection represent?	When they both have the same amount of money.										
31.	<p>Which equation below represents the relationship shown in the table?</p> <table border="1" data-bbox="537 598 927 705"> <tbody> <tr> <td>x</td> <td>0</td> <td>1</td> <td>3</td> </tr> <tr> <td>y</td> <td>5</td> <td>7</td> <td>11</td> </tr> </tbody> </table> <p>A $y = x + 5$ C $y = 2x + 5$ B $y = x + 6$ D $y = 3x + 2$</p>	x	0	1	3	y	5	7	11	C		
x	0	1	3									
y	5	7	11									
32.	<p>A sailboat rental company charges an initial fee plus an hourly rate to rent sailboats. The costs are shown in the table below.</p> <table border="1" data-bbox="383 951 1083 1087"> <tbody> <tr> <td>Number of Hours</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>Price (\$)</td> <td>22.50</td> <td>29.25</td> <td>36.00</td> <td>42.75</td> </tr> </tbody> </table> <p>Write a linear equation that shows the relationship between the cost and the number of hours of the sailboat rental.</p>	Number of Hours	1	2	3	4	Price (\$)	22.50	29.25	36.00	42.75	$y = 6.75x + 15.75$
Number of Hours	1	2	3	4								
Price (\$)	22.50	29.25	36.00	42.75								
33.	What is the initial fee to rent a sailboat?	\$15.75										
34.	What is the hourly rate to rent a sailboat?	\$6.75										
35.	<p>A furnace operates at $2300^{\circ}F$. Before it can be used to extract metal from an ore, the temperature must be raised to $3600^{\circ}F$. This takes place at a rate of $250^{\circ}F$ per quarter hour. Which equation gives the furnace temperature T after q quarter hours?</p> <p>A $T = 250q + 2300$ C $T = 2300q + 250$ B $T = 250q + 3600$ D $T = 3600q + 250$</p>	A										
36.	<p>Jose deposited \$250 into his savings account. He then saved \$40 per month. Which of the following equations shows a, the amount in Jose's savings account after t months?</p> <p>A $a = 40t + 250$ C $a = 250t + 40$ B $a = -40t + 250$ D $a = 210t + 40$</p>	A										