More Patterns and Equations

The entry fee to a carnival is $3. Each ride ticket is $2. The cost of going to the carnival equals the entry fee plus two times the number of tickets purchased, $c = 3 + 2t$.

You can substitute numbers into the equation to make a table showing the cost compared to the number of tickets purchased.

$c = 3 + 2t.$

Tickets t	3 + 2t	Cost c
0	3 + 2(0)	$3
2	3 + 2(2)	$7
4	3 + 2(4)	$11
6	3 + 2(6)	$15

In **1** through **4**, use the equation to complete each table.

1. $y = 3x + 7$

x	0	1	2	3
y				

2. $y = 4x - 4$

x	2	4	6	8
y				

3. $y = 2x + 7$

x	1	3	5	7
y				

4. $y = \frac{1}{4}x + 5$

x	0	4	8	12
y				

5. Reasoning For the equation $y = 1x - 25$, will the value of y increase or decrease as x increases?

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6. Algebra Write an equation in words and in symbols to represent this situation:
Grace has $100. She is buying charms for her bracelet that cost $5 each. Write an equation showing the relationship between the number of charms (c) she buys and the amount of money she has left (l).

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7. Number Sense How many charms can Grace buy before she runs out of money?

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