6th Grade
Math

Name Key

Chapter 8 Practice Test

1. Complete the function table

Input (x)	$3x - 5$	Output (y)
1	$3(1)-5$	2
4	$3(4)-5$	7
9	$3(9)-5$	16

$3x - 5 = 16$
$+5 \quad +5$
$\frac{3}{3}x = \frac{21}{3}$
$x = 7$

Find the rule for each function table

2.

Input (x)	Output (y)
6	1
12	2
36	6

divide by 6

$\frac{x}{6} = y$

3.

Input (x)	Output (y)
5	11
7	15
11	23

$\frac{\Delta y}{\Delta x} = \frac{4}{2} = \frac{8}{4} = 2$

$y = 2x + 1$

(This one will be a challenge- use two operations!)

4.

Input (x)	Output (y)
0	0
2	4
4	8

multiply by 2

$y = 2x$

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5. Julian wants to spend no more than $1,050 on his trip. The airfare is $217. **Write and solve** an inequality to find the maximum amount he can spend on the rest of his trip.

$x + 217 \leq 1050$
$-217 \quad -217$
$x \leq 833$

6. Write an inequality to represent each situation

   a. The decorations cost less than $9.

   $d < 9$

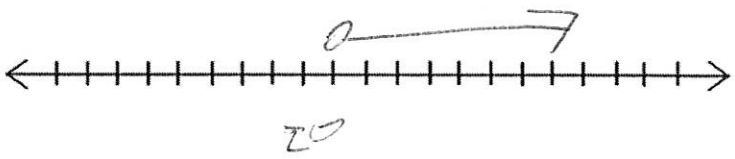
   b. Seniors ages 65 and over qualify for free admission

   $s \geq 65$

7. Solve each inequality. Then graph the solution on a number line.

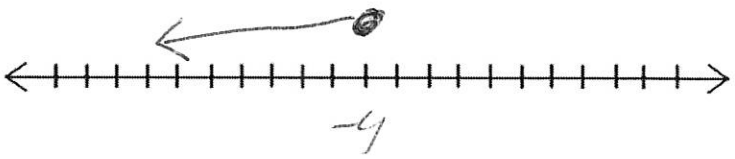
   a. $12 < m - 8$ $m > 20$

   $+8 \quad +8$
   $20 < m$



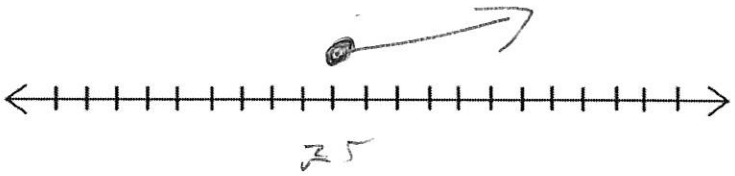
   b. $d + 6 \leq 2$

   $-6 \quad -6$
   $d \leq -4$



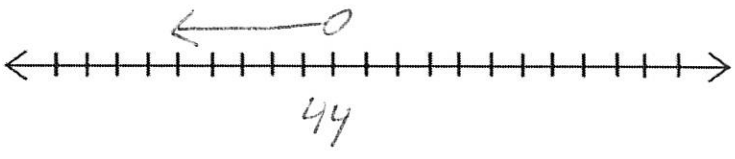
   c. $3x \geq 75$

   $\frac{3}{3} \quad \frac{3}{3}$
   $x \geq 25$



   d. $\frac{n}{4} < 11$ $\cdot 4$

   $n < 44$



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8. Write an equation that represents the function

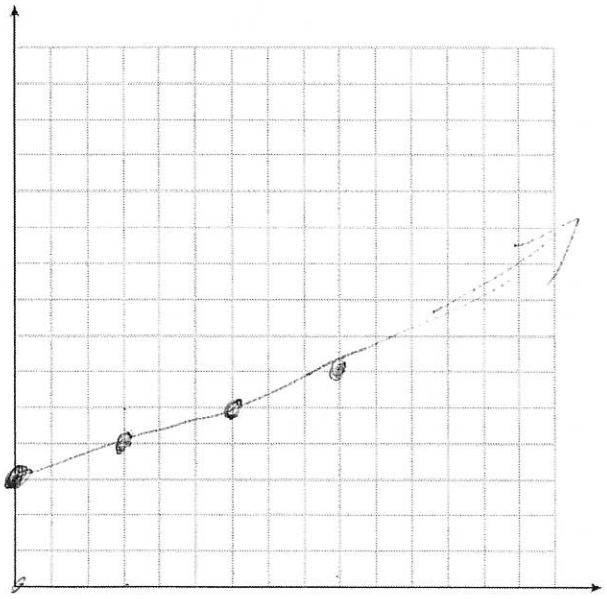
Input, x	1	2	3	4
Output, y	3	7	11	15

$\frac{\Delta y}{\Delta x} = \frac{4}{1} = 4$

$y = 4x - 1$

adjust...

9. Graph the equation $y = \frac{1}{3}x + 3$



x	y	
0	3	$\frac{1}{3}(0)+3$
1	$3\frac{1}{3}$	
2	$3\frac{2}{3}$	
3	$3\frac{3}{3} = 4$	
6	$2+3=5$	
9	$3+3=6$	

10. Determine the rule that represents the function and find the value of the 9th term

Position	1	2	3	4	n
Value of Term	6	12	18	24	

multiply by 6.

$6n$

$6(9) = 54$