Test: Function Tables & Rules

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- Find function rule
- Complete a table
- Find a later term
- Real-life situations
- Constructed-response
- Bonus questions!
- Answer key provided

Name_____ Date _____ *CCSS 6.EE.9*

TEST

Function Tables and Rules

Points Earned _____ / 100

Letter Grade _____

Part I: Complete each table using the function rule. *(2 points per blank)*

1.) **Rule: x + 4 = y**

Input (x)	Output (y)
0	
2	6
	8
6	

2.) **Rule: x ÷ 3**

Input (x)	9	15	21	
Output (y)		5		8

3.) **Rule: 10x = y**

Input (x)	Output (y)
0	
1	10
	40
9	

4.) **Rule: x – 9 = y**

Input (x)	10	12	13	20	
Output (y)	1		4		21

Part II: Write each function rule using x and y, and use it to complete the table. *(4 points per rule; 2 points per blank)*

5.) **Rule:** _____

Input (x)	3	20	8	12	5	
Output (y)	33	220			55	66

6.) **Rule:** _____

Input (x)	6	18	11	7		85
Output (y)		23	16	12	55	

7.) **Rule:** _____

Input (x)	Output (y)
15	9
9	
8	2
19	13
	20
88	

8.) **Rule:** _____

Input (x)	Output (y)
4	1
12	
36	9
40	10
16	
	6

Part III: Choose the best answer. *(4 points each)*

9.) Jake has a lawn mowing service. The table below displays his expenses and earnings on four different jobs. If this pattern of expenses to earnings continues, what will Jake's earnings be on a job with $200 in expenses?

Expenses	Earnings
$25	$75
$50	$100
$75	$125
$100	$150

A. $125
B. $250
C. $175
D. $325

Use the information below to answer questions 10 and 11.

Kaylee is selling hair bows for $8 each to save money for a new iPod that costs $139.

Bows Sold (b)	1	4	7
Money Saved (m)	$8	$32	$56

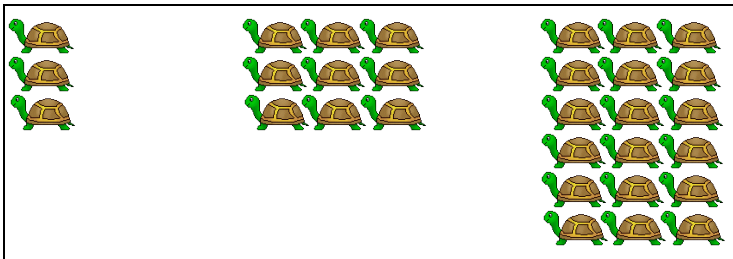
10.) Which expression represents the rule for this table?

A. m = $8 - b
B. m = b ÷ $8
C. m = b + $8
D. m = $8b

11.) What is the least amount of bows Kaylee would need to sell in order to earn enough money to buy the new iPod?

A. 17 bows
B. 18 bows
C. 19 bows
D. 20 bows

Part IV: Study the figures below. Then, complete the function table. Finally, answer the two questions that follow.



1st Figure **3rd Figure** **6th Figure**

12.) Complete the function table. *(2 points per blank)*

Figure	1	3	6
Turtles			

13.) Write the rule using variables. *(4 points)*

14.) How many turtles would be in the 15th figure? *(2 points)*

Part V: Complete the function table. Find the expression that represents the rule. Then, use the rule to answer the question.

Josh is trying to earn money for a fieldtrip for his class. Mrs. Johnson agreed to give him a one-time donation of $22. For every touchdown Josh scores, Coach Andrews said he will give him $8. Using this information, complete the table.
(1 point per blank)

# of Touchdowns	Money Raised ($)
0	
1	
4	
6	
10	
12	
15	

15.) Write the expression (function rule) _____ *(2 points)*

16.) If Josh needs to raise at least $150, how many touchdowns will he have to score this season? *(3 points)*

BONUS! You must answer the bonus questions. *(+3 points each)*

Bonus #1:

Write the rule using x and y _____

Input (x)	1	3	5	20
Output (y)	8	14	20	65

Bonus #2:

Complete the table using the rule 30 – 2x = y

Input (x)	3	8	14
Output (y)	24		2

Name_____**Answer Key**_____ Date _____ *CCSS 6.EE.9*

TEST

Function Tables and Rules

Points Earned _____ / 100

Letter Grade _____

Part I: Complete each table using the function rule. *(2 points per blank)*

1.) **Rule: x + 4 = y**

Input (x)	Output (y)
0	4
2	6
4	8
6	10

2.) **Rule: x ÷ 3**

Input (x)	9	15	21	24
Output (y)	3	5	7	8

3.) **Rule: 10x = y**

Input (x)	Output (y)
0	0
1	10
4	40
9	90

4.) **Rule: x – 9 = y**

Input (x)	10	12	13	20	30
Output (y)	1	3	4	11	21

Part II: Write each function rule using x and y, and use it to complete the table. *(4 points per rule; 2 points per blank)*

5.) **Rule: _____11x = y___**

Input (x)	3	20	8	12	5	6
Output (y)	33	220	88	132	55	66

6.) **Rule: ___x + 5 = y__**

Input (x)	6	18	11	7	50	85
Output (y)	11	23	16	12	55	90

7.) **Rule: _____x - 6 = y____**

Input (x)	Output (y)
15	9
9	3
8	2
19	13
26	20
88	82

8.) **Rule: _____x ÷ 4 = y__**

Input (x)	Output (y)
4	1
12	3
36	9
40	10
16	4
24	6

Part III: Choose the best answer. *(4 points each)*

9.) Jake runs a lawn mowing service. The table below displays his expenses and earnings on four different jobs. If this pattern of expenses to earnings continues, what will Jake's earnings be on a job with $200 in expenses?

Expenses	Earnings
$25	$75
$50	$100
$75	$125
$100	$150

A. $125

B. $250

C. $175

D. $325

Use the information below to answer questions 10 and 11.

Kaylee is selling hair bows for $8 each to save money for a new iPod that costs $139.

Bows Sold (b)	1	4	7
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10.) Which expression represents the rule for this table?

A. m = $8 - b

B. m = b ÷ $8

C. m = b + $8

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11.) What is the least amount of bows Kaylee would need to sell in order to earn enough money to buy the new iPod?

A. 17 bows

B. 18 bows

C. 19 bows

D. 20 bows

Part IV: Study the figures below. Then, complete the function table. Finally, answer the two questions that follow.

1st Figure **3rd Figure** **6th Figure**

12.) Complete the function table. *(2 points per blank)*

Figure	1	3	6
Turtles	3	9	18

13.) Write the rule using variables. *(4 points)*

y = 3x

14.) How many turtles would be in the 15th figure? *(2 points)*

45

Part V: Complete the function table. Find the expression that represents the rule. Then, use the rule to answer the question.

Josh is trying to earn money for a fieldtrip for his class. Mrs. Johnson agreed to give him a one-time donation of $22. For every touchdown Josh scores, Coach Andrews said he will give him $8. Using this information, complete the table.
(1 point per blank)

# of Touchdowns	Money Raised ($)
0	22
1	30
4	54
6	70
10	102
12	118
15	142

15.) Write the expression (function rule) _____y = 22 + 8x_____ *(2 points)*

16.) If Josh needs to raise at least $150, how many touchdowns will he have to score this season? *(3 points)*

150 = 22 + 8x
128 = 8x
16 = x

He will need to score 16 touchdowns.

BONUS! You must answer the bonus questions. *(+3 points each)*

Bonus #1:

Write the rule using x and y ___3x + 5 = y__

Input (x)	1	3	5	20
Output (y)	8	14	20	65

Bonus #2:

Complete the table using the rule 30 – 2x = y

Input (x)	3	8	14
Output (y)	24	14	2