

Display Master: Key Ideas: Find the Missing Value

- Multiplicative thinking is present when a value is multiplied by a constant rate to get the resulting value.
- Given a scenario and table of values, a rule can be determined. This rule can be used to find any missing value in the table.
- If given the y value in the table, the x value can be determined by performing the inverse operation.

Display Master: Cookies A

Ray is making chocolate chip cookies for his mother's birthday party. The recipe calls for 1 bag of chocolate chips per 1 dozen cookies.



Display Master: Cookies B

Bags of chocolate chips x	Process	Total number of cookies made y
1		12
2		24
3		36
5		
6		72
10		
x		

Display Master: Cookies C

Bags of chocolate chips x	Process	Total number of cookies made y
1	12(1)	12
2	12(2)	24
3	12(3)	36
5	12(5)	
6	12(6)	72
10	12(10)	
x	12(x)	

Display Master: Cookies D

Bags of chocolate chips x	Process	Total number of cookies made y
1	$12(1)$	12
2	$12(2)$	24
3	$12(3)$	36
5	$12(5)$	60
6	$12(6)$	72
10	$12(10)$	120
x	$12(x)$	$12x$

Therefore, $y = 12x$

Display Master: Car Wash A

Mandy washes cars in her neighborhood for \$9 per car. Last weekend, she washed 5 cars and earned \$45.

Display Master: Car Wash B

Number of cars washed x	Process	Amount of money earned (in dollars) y
1		9
2		18
3		
4		
5		45
10		
x		



Display Master: Car Wash C

Number of cars washed x	Process	Amount of money earned (in dollars) y
1	$9(1)$	9
2	$9(2)$	18
3	$9(3)$	
4	$9(4)$	
5	$9(5)$	45
10	$9(10)$	
x	$9(x)$	

Display Master: Car Wash D

Number of cars washed x	Process	Amount of money earned (in dollars) y
1	$9(1)$	9
2	$9(2)$	18
3	$9(3)$	27
4	$9(4)$	36
5	$9(5)$	45
10	$9(10)$	90
x	$9(x)$	$9x$

Therefore, $y = 9x$

Display Master: Car Wash E

Number of cars washed x	Process	Amount of money earned (in dollars) y
1	$9(1)$	9
2	$9(2)$	18
3	$9(3)$	27
4	$9(4)$	36
5	$9(5)$	45
_____	$9(\text{_____})$	63
10	$9(10)$	90
_____	$9(\text{_____})$	99
x	$9(x)$	$9x$