Math Practice - Grade 8

M6 Linear functions and modeling - Rate of change and initial value

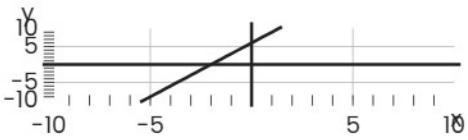
M6 8.F.B.4, 8.F.B.5

Name: _____ Date: _____

Read the description, table, or graph. Write the initial value and the rate of change.

Example: Find the initial value and the rate of change from the graph.

How: The initial value is the starting value, where x is 0. The rate of change is how much y changes for each step in x. The function is y equals rate times x plus initial value.



Initial value 6

Rate of change 3

1

x	y
0	6
1	10
2	14
3	18

Initial value ☐

Rate of change ☐

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2 **A taxi charges a 8 starting fee plus 8 per mile. What is the initial value? What is the rate of change?**

Initial value ☐

Rate of change ☐

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3 **A taxi charges a 4 starting fee plus 6 per mile. What is the initial value? What is the rate of change?**

Initial value ☐

Rate of change ☐

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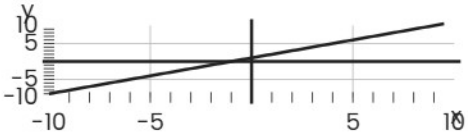
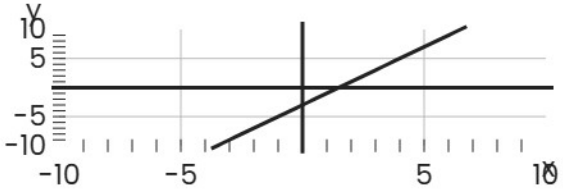
How: The initial value is the starting value, where x is 0. The rate of change is how much y changes for each step in x. The function is y equals rate times x plus initial value.



Initial value 1

Rate of change 1

1



Initial value _____

Rate of change _____

2

x	y
0	9
1	11
2	13
3	15

Initial value _____

Rate of change _____

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3 A phone plan costs 11 per month plus 5 per gigabyte. What is the initial value? What is the rate of change?

Initial value _____

Rate of change _____

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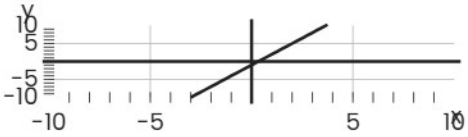

Initial value -1

Rate of change 3

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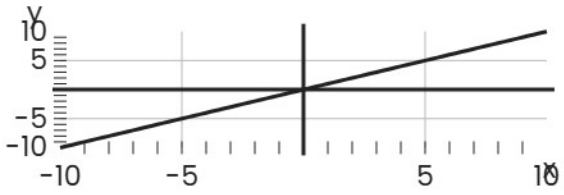
1 **A gym charges a 11 joining fee plus 4 per month. What is the initial value? What is the rate of change?**

Initial value ☐

Rate of change ☐

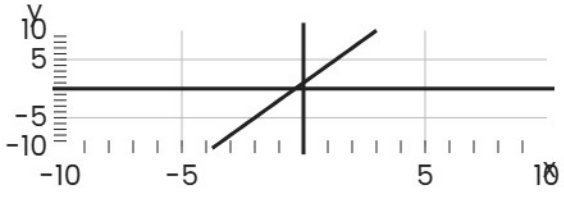
2



Initial value ☐

Rate of change ☐

3



Initial value ☐

Rate of change ☐