MASTERY VIEW Predictive Assessments

North Carolina Sample Questions Math I

Paper-and-pencil assessments will contain multiple choice and gridded response items. Online assessments will also contain technology-enhanced items.

1. Justin compares bank loans in order to buy a car. The table shows the summaries of the bank loans he is offered.

Bank	Loan
Bank 1	a loan of $\$12,000$ at a rate of 4.5% compounded monthly
Bank 2	a loan of $\$15,000$ with a payment of $\$500$ a month

Which statement best describes the loans Justin is being offered by the two banks?

- **A** Both loans represent linear functions.
- **B** Both loans represent exponential functions.
- **C** The loan from Bank 1 is linear, while the loan from Bank 2 is exponential.
- **D** The loan from Bank 2 is linear, while the loan from Bank 1 is exponential.
- 2. The table shows the average daily temperature versus the number of bags of ice sold at a convenience store.

Temperature (°F)	82	88	93	98	89	91	85
Number of Bags of Ice Sold	18	24	31	38	32	34	26

Which graph best depicts the data and the line-of-best fit?



3. Ms. Padilla works 5 days per week for 8 hours per day. She works 48 weeks per year. She makes \$45,000 per year.

How much does Ms. Padilla earn per hour?

- **A** \$22.50
- **B** \$23.44
- **C** \$36.06
- **D** \$42.67

DIRECTIONS FOR THE GRIDDED RESPONSE QUESTION:

- Question 1 requires you to write your answer in the boxes provided on the back of your answer document.
- Write only the number or symbol in each box, and fill in the circle in each column that matches what you have printed.
- Fill in only 1 circle in each column.
- The table represents a linear function. 1.

x	f(x)
-2	-8
0	-2
2	4
4	10

What is the average rate of change for the function over the interval from x = -2 to x = 2?

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õ	õ	õ	õ	õ	õ
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	(5)	5	(5)	5
6	6	6	6	6	6
1	1	1	\bigcirc	1	\bigcirc
1	8	8	8	8	8
9	9	9	9	9	9