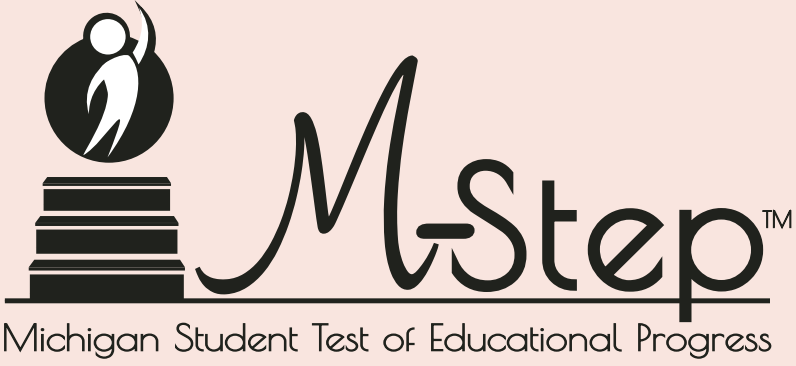


Student Name _____



3rd
4th
5th
6th
7th
8th
FS

Sample Items

Grade
7
Form
S

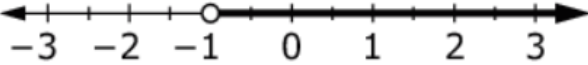
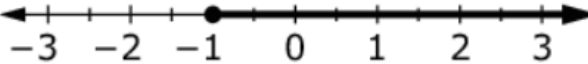
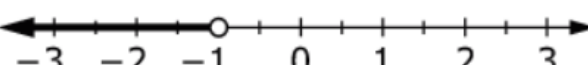
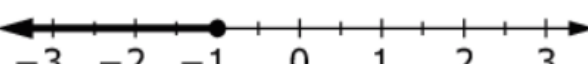
MATHEMATICS

M-STEP Grade 7 MATHEMATICS Sample

No calculators allowed on items 1 to 4.

1. Which number line shows the solution to the inequality

$$-3x - 5 < -2?$$

- A. 
- B. 
- C. 
- D. 

2. A representative sample of 50 students from a high school is surveyed. Each student is asked what science class he or she is taking.

This table shows the responses.

Science Class	Number of Students
Physics	6
Chemistry	10
Biology	18
Earth Science	4
Health Science	12

Select **all** of the statements that are valid based on the survey results.

- About 20% of students at the high school are taking Chemistry.
- About twice as many students are taking Health Science than are taking Physics.
- For every 150 students we could predict that at least 18 of the students are taking Physics.
- For every 25 students we could predict that at least 4 of the students are taking Earth Science.

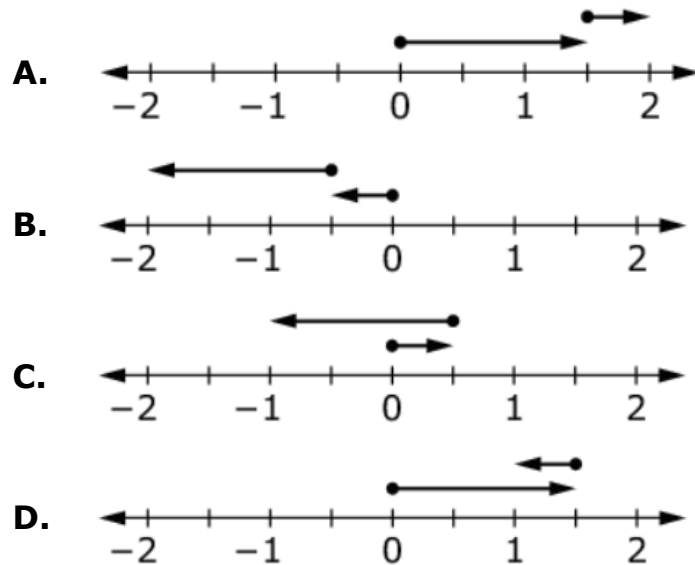
3. George earns \$455 per week. George receives a 20% raise.

How can George calculate his new weekly pay rate?

Select all calculations that will result in George's new weekly pay rate.

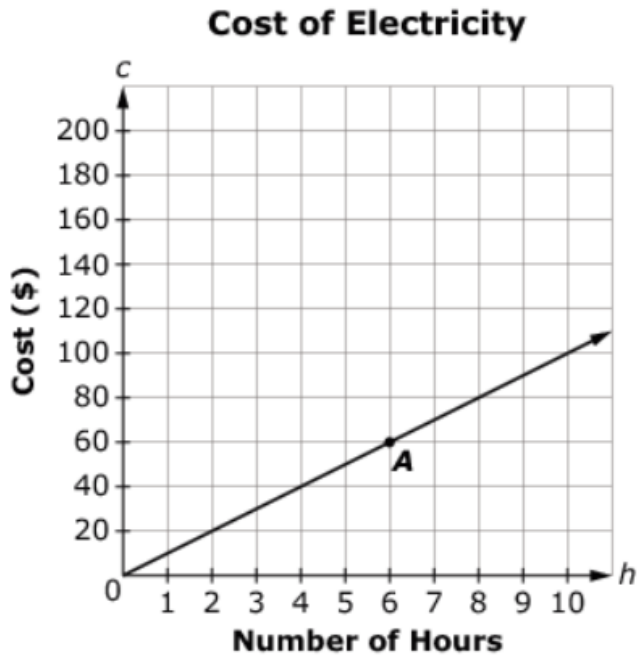
- divide \$455 by 0.20
- divide \$455 by 1.20
- multiply \$455 by 0.20
- multiply \$455 by 1.20
- solve for x : $\frac{x}{455} = \frac{120}{100}$
- solve for x : $\frac{455}{x} = \frac{20}{100}$

4. Which number line model represents the sum of $1\frac{1}{2} + (-\frac{1}{2})$?



Calculators allowed on following items.

5. This graph shows a proportional relationship between the number of hours (h) a business operates and the total cost (c) of electricity.



Select True or False for each statement about the graph.

	True	False
Point A represents the total cost of electricity when operating the business for 6 hours.	<input type="checkbox"/>	<input type="checkbox"/>
The total cost of electricity is \$8 when operating the business for 80 hours.	<input type="checkbox"/>	<input type="checkbox"/>
The total cost of electricity is \$10 when operating the business for 1 hour.	<input type="checkbox"/>	<input type="checkbox"/>

M-STEP Grade 7 MATHEMATICS Sample

6. Determine whether each statement is true for all cases, true for some cases, or not true for any case.

	True for all cases	True for some cases	Not true for any cases
Two vertical angles form a linear pair.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If two angles are supplementary and congruent, then they are right angles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The sum of two adjacent angles is 90° .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The measure of an exterior angle of a triangle is greater than every interior angle of the triangle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

M-STEP Grade 7 MATHEMATICS Sample

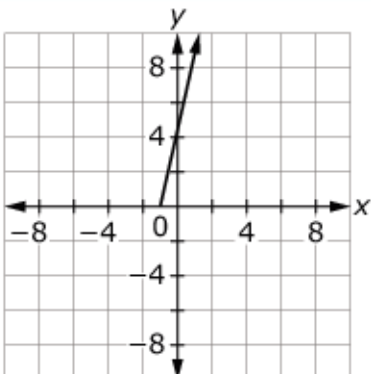
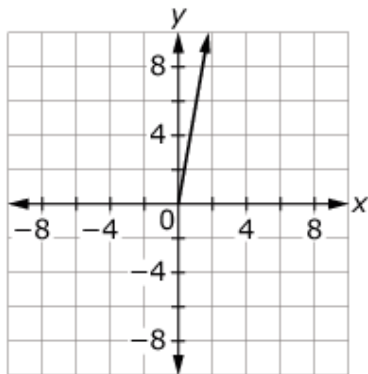
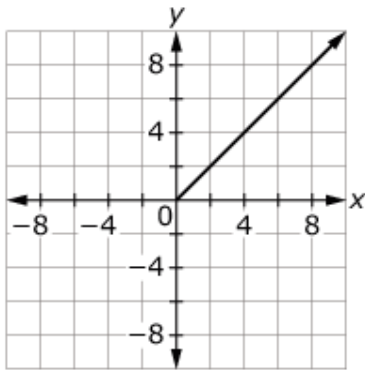
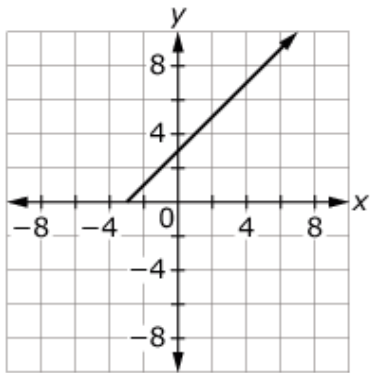
7. Aimee has \$10 to spend on school supplies. The following table shows the price of each item in the school store. No sales tax is charged on these items.

Item	Price
Eraser	\$0.89
Folder	\$1.29
Notebook	\$2.35
Pen	\$0.70

Determine if Aimee can buy the combination of items with her \$10. Select Yes or No for each combination of items.

	Yes	No
5 folders and 5 pens	<input type="checkbox"/>	<input type="checkbox"/>
6 pens and 6 erasers	<input type="checkbox"/>	<input type="checkbox"/>
1 pen and 4 notebooks	<input type="checkbox"/>	<input type="checkbox"/>
3 folders and 7 erasers	<input type="checkbox"/>	<input type="checkbox"/>
4 folders and 2 notebooks	<input type="checkbox"/>	<input type="checkbox"/>

8. Select **all** the graphs that show a proportional relationship between x and y .



Answer Key

- 1. A
- 2. Yes, Yes, Yes, No
- 3. No, No, No, Yes, Yes, No
- 4. D
- 5. True, False, True

6.

	True for all cases	True for some cases	Not true for any cases
Two vertical angles form a linear pair.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If two angles are supplementary and congruent, then they are right angles.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The sum of two adjacent angles is 90° .	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The measure of an exterior angle of a triangle is greater than every interior angle of the triangle.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- 7. Yes, Yes, No, No, Yes

8.

