

Mathematics Sample Test Booklet 2018

Paper-Pencil Format
Student Version, Grades 6–8

This test booklet contains several different types of problems as shown below. Each sample shows what a certain type of problem looks like in the test booklet. Respond to each problem in your answer booklet. Let's practice!

Sample A – Multiple Choice:

Exactly how many sides does an octagon have?

- A. 5
- B. 6
- C. 7
- D. 8

Sample B – Multiple-select Response:

Select **all** numbers that are solutions to the inequality $w > 7$.

- A. 2
- B. 4
- C. 6
- D. 8
- E. 9

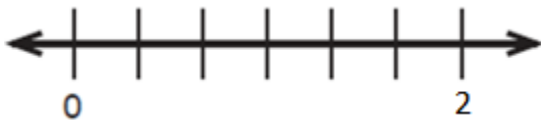
Sample C – Table Response:

Decide whether each equation is true. Select Yes or No for each equation.

		Yes	No
a.	$6w + w = 7w$	(Y)	(N)
b.	$15(2) = 30$	(Y)	(N)
c.	$4.5 \div 1 = 3.5$	(Y)	(N)

Sample D – Short Response:

Draw a point on the number line where the number $\frac{2}{3}$ is located.



Sample E – Answer Box:

Enter the sum: $\frac{2}{5} + \frac{4}{5} =$


This table shows how the sample problems on page 2 should be completed in the answer booklet.


SAMPLES

A A B C

B A B C
 Select all that apply.

C *a* N
b N
c Y

D 

E 
 Write your answer in the box shown above.

Mathematics

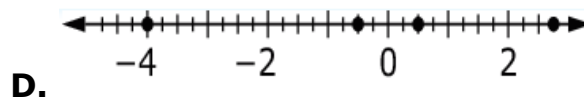
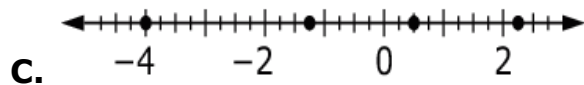
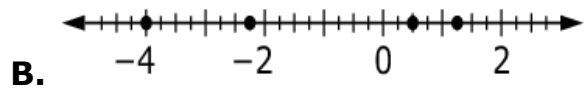
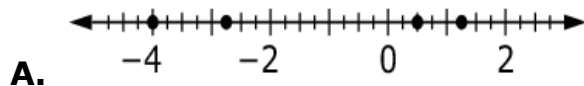
Grades 6–8

Sample Booklet

Read each problem carefully and follow the directions. You may do your work in this test booklet, but you must mark your answers in the answer booklet.

- 1.** Which number line shows the correct locations of **all** the given values?

$$\frac{1}{2}, -4, -2\frac{3}{4}, 1\frac{1}{4}$$



- 2.** Select **all** equations that have $x = 3$ as a solution.

A. $x + 7 = 10$

B. $3 + x = 3$

C. $x \cdot 3 = 1$

D. $4 \cdot x = 12$

- 3.** Sea level is 0 feet in elevation. The elevation of land represents its heights above or below sea level. This table shows the lowest elevation in some states.

State	Lowest Elevation (ft)
Arizona	72
California	- 282
Louisiana	- 68
Tennessee	178

Determine whether each statement about the elevations is correct. Select True or False for each statement.

- | | True | False |
|---|--------------|--------------|
| a. The elevation at the lowest point in California is higher than the lowest point in Louisiana. | (T) | (F) |
| b. The elevation at the lowest point in Tennessee is farther from 0 than the elevation at the lowest point of Louisiana. | (T) | (F) |
| c. The elevation at the lowest point in Louisiana is higher than the lowest point in California. | (T) | (F) |
- 4.** Consider the inequality $x > 7$.

Determine whether each value of x makes this inequality true. Select Yes or No for each value.

- | | Yes | No |
|---------------|--------------|--------------|
| a. 22 | (Y) | (N) |
| b. -7 | (Y) | (N) |
| c. 13 | (Y) | (N) |
| d. 5 | (Y) | (N) |
| e. -39 | (Y) | (N) |

- 5.** What is the value of the expression $2.3 \bullet (4 + 12)$?
- 6.** The equation shown has an unknown number.

$$\square \div \frac{2}{3} = \frac{3}{4}$$

What fraction makes the equation true?

- 7.** Tyler is 8 years old. His sister Olivia is 4 years less than twice his age.
Write a numerical expression for Olivia's age.
- 8.** This table contains x and y values in equivalent ratios. Fill in the missing value in the table.

x	y
2	6
5	
7	21
9	27

- 9.** Micah constructs a rectangular prism with a volume of 360 cubic units. The height of the prism is 10 units.
Micah claims that the base of the prism must be a square.
Draw a base that shows Micah's claim is incorrect.
- 10.** The expressions $4(4^2)(8 \cdot 2)$ and 4^5 are equivalent.

Show that the two expressions are equivalent. Describe the steps that can be applied to $4(4^2)(8 \cdot 2)$ to create the equivalent expression 4^5 .