# Mathematically Connected Communities
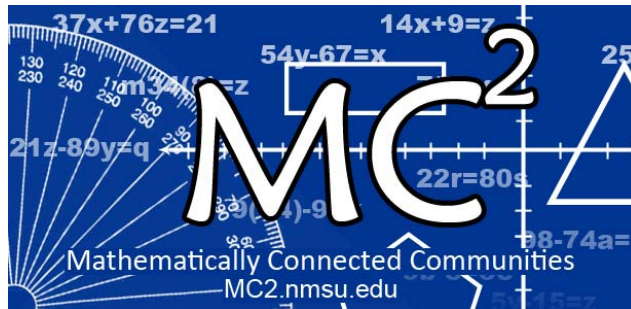


# PARCC EOY Practice Test Items
# 5<sup>th</sup> Grade Mathematics

# Mathematical Practice Questions for MC$^2$ Thinking Protocol

Follow the process below in working with the PARCC practice items found in this packet:

1. Choose items from this packet that relate to math concepts studied in the current or previous curriculum units during your math instruction. Each item may be used as a practice item worksheet.
2. Choose a set of **Thinking/Writing Prompts** below based on the math practice the class is working to develop.
3. Add the prompts to the practice item worksheet or display the prompts for the students to respond to.
4. Continue using the same set of prompts for an extended period of time so children develop competence and confidence in describing their mathematical thinking related to the math practice.

The questions below were intentionally not included on each MC$^2$ PARCC practice item worksheet in this packet. These are intended to help students move beyond "answer getting" to fully making sense of test item questions and their own mathematical thinking.

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### Thinking/Writing Prompts to Promote Mathematical Practices

Math Practice 1: **Make sense of problems and persevere in solving them.**
1. What do you know about the problem?
2. What questions do you have?
3. Explain your reasoning or thinking in solving the problem.

Math Practice 3: **Construct viable arguments and critique the reasoning of others.**
1. What are the assumptions, definitions, and previous knowledge to help in thinking about this problem?
2. What are some possible conjectures that you have about the problem?
3. Explain your mathematical argument so that somebody else can make sense of your thinking.

Math Practice 4: **Model with mathematics.**
1. What are the important quantities in the problem that are needed to solve it?
2. What mathematical operation(s) or representation(s) will you use to solve the problem?
3. Explain how you know your answer makes sense in the context of the situation.

Math Practice 6: **Attend to precision.**
1. What are the important units in the problem? (What are we measuring or counting?)
2. What relationship between the units/quantities do you need to know in order to solve the problem?
3. Use appropriate and precise mathematical language, units, labels and computations to clearly describe your mathematical reasoning.

Jim uses ribbon to make bookmarks. Jim has 9 feet of ribbon. He uses $\frac{1}{3}$ foot of ribbon to make each bookmark.

What is the total number of bookmarks Jim makes with all 9 feet of ribbon?

Enter your answer in the box.

|  | bookmarks |
|---|---|

**5th Grade PARCC EOY Practice Assessment Item #2: Standard 5.G.1**

Graph points $A$, $B$, and $C$ on the coordinate plane. Point $A$ should be located at $(4,6)$, point $B$ should be located at $(6,4)$, and point $C$ should be located at $(3,0)$. Select the "Point A" button and plot the point. Select the "Point B" button and plot the point. Select the "Point C" button and plot the point. Be sure to graph all **three** points.

Point A

Point B

Point C
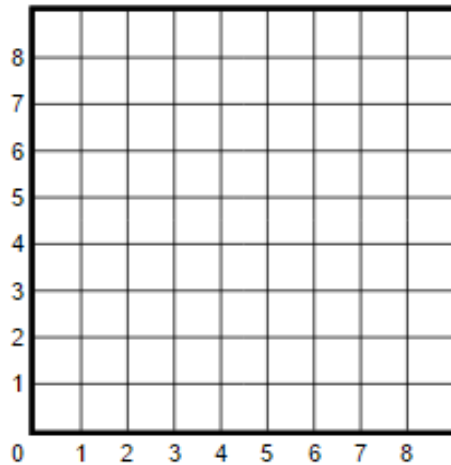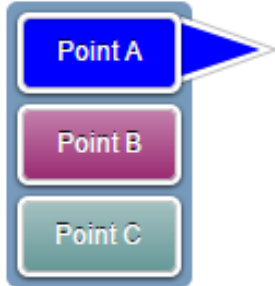
**5th Grade PARCC EOY Practice Assessment Item #3: Standard 5.OA.1**

Enter your answer in the box.

$3 \times (8 + 16) \div 4 =$ [            ]

Len walks $\frac{3}{10}$ mile in the morning to school. He walks $\frac{2}{5}$ mile in the afternoon to a friend's house.

Len says that he walks a total of $\frac{5}{15}$ mile in the morning and afternoon.

Which **two** statements are true?

☐  A.  Since $\frac{3}{10}$ plus $\frac{2}{5}$ is $\frac{5}{15}$ , the total of $\frac{5}{15}$ is reasonable.

☐  B.  Since $\frac{5}{15}$ is less than $\frac{2}{5}$, the total of $\frac{5}{15}$ is not reasonable.

☐  C.  The fractions $\frac{5}{15}$ , $\frac{3}{10}$ , and $\frac{2}{5}$ are all less than $\frac{1}{2}$ , so the total of $\frac{5}{15}$ is reasonable.

☐  D.  The fraction $\frac{5}{15}$ is $\frac{1}{3}$ , and $\frac{1}{3}$ is greater than $\frac{3}{10}$ . Since $\frac{5}{15}$ is greater than one of the addends,

the total of $\frac{5}{15}$ is reasonable.

☐  E.  The fractions $\frac{3}{10}$ and $\frac{2}{5}$ are each greater than $\frac{1}{4}$ . so the total must be greater than $\frac{1}{2}$ . The

fraction $\frac{5}{15}$ is less than $\frac{1}{2}$ , so the total of $\frac{5}{15}$ is not reasonable.

**5th Grade PARCC EOY Practice Assessment Item #6: Standard 5.NBT.4**

Drag and drop one number into each box. When you are finished, the number inside each box should match the number below the box when rounded to the nearest hundredth.

| 5.025 | 5.079 | 5.103 | 5.117 | 5.066 | 5.108 |

| | | | |
|---|---|---|---|
| | | | |

| 5.07 | 5.08 | 5.10 | 5.11 |

Which explanation about figures is correct?

○ A. All rhombuses are parallelograms. Parallelograms have 2 pairs of parallel sides. Therefore, all rhombuses have 2 pairs of parallel sides.

○ B. All rhombuses are parallelograms. Parallelograms have exactly 1 pair of parallel sides. Therefore, all rhombuses have exactly 1 pair of parallel sides.

○ C. Only some rhombuses are parallelograms. Parallelograms have 2 pairs of parallel sides. Therefore, only some rhombuses have 2 pairs of parallel sides.

○ D. Only some rhombuses are parallelograms. Parallelograms have exactly 1 pair of parallel sides. Therefore, only some rhombuses have exactly 1 pair of parallel sides.
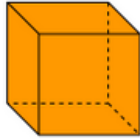
This table shows the three different ways that toy animals are packaged at a factory.

| Package Type | Amount in the Package |
| --- | --- |
| Bag | 36 toy animals |
| Box | 48 bags |
| Crate | 18 boxes |

Bag
36 toy animals

Box
48 bags
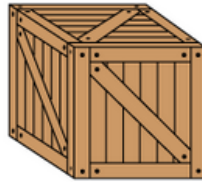
Crate
18 boxes

not to scale

**Part A**

What is the total number of toy animals in one crate?

Enter your answer in the box.

[                    ] toy animals

**Part B**

One bag of toy animals weighs 12 ounces. What is the total weight, in ounces, of the bags of toy animals in one crate?

Enter your answer in the box.

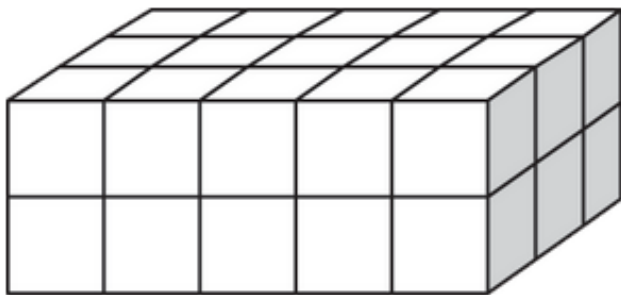[                    ] ounces

Isabel lives $\frac{3}{4}$ mile from school. Janet lives $\frac{2}{3}$ mile from school.

How much farther, in miles, does Isabel live from school than Janet? Enter your answer in the space provided. Enter **only** your fraction.

**5th Grade PARCC EOY Practice Assessment Item #10: Standard 5.MD.4**

The rectangular prism shown is made from cubes. Each cube is 1-cubic unit.



What is the volume, in cubic units, of the rectangular prism? Enter your answer in the box.

| | cubic units
|---|

**5th Grade PARCC EOY Practice Assessment Item #11: Standard 5.NBT.5**

Enter your answer in the box.

$463 \times 1{,}945 = $ [                    ]

Enter your answer in the space provided.

$$\frac{3}{4} + \frac{4}{5} - \frac{7}{10} =$$

Drag and drop the names to complete the diagram that shows the relationship among the figures listed. Each category will be used only once.

| rhombuses | rectangles |
|---|---|
| parallelograms | quadrilaterals |
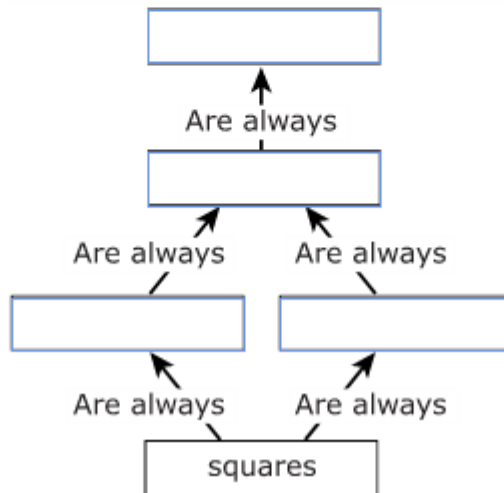
```
          ┌──────────────┐
          └──────────────┘
                 ▲
             Are always
          ┌──────────────┐
          └──────────────┘
            ▲          ▲
       Are always   Are always
    ┌──────────┐      ┌──────────┐
    └──────────┘      └──────────┘
            ▲          ▲
       Are always   Are always
          ┌──────────────┐
          │   squares    │
          └──────────────┘
```

Enter your answer in the box.

$0.35 \times 1.5 =$ _____

**Part A**

Enter your answer in the box.

$6.3 \times 0.1 =$ [ ]

**Part B**

Enter your answer in the box.

$6.3 \div 0.1 =$ [ ]

Emma has a board that is 5-feet long. She cuts the board into 6 equal pieces.

Which equation shows how to find the length, in feet, of each piece of the board?

○ A. $5 \times 6 = 30$

○ B. $6 - 5 = 1$

○ C. $6 \div 5 = 1\frac{1}{5}$

○ D. $5 \div 6 = \frac{5}{6}$

A cereal box has a height of 32 centimeters. It has a base with an area of 160-square centimeters.

What is the volume, in cubic centimeters, of the cereal box?

Enter your answer in the box.

[                    ] cubic centimeters

**5th Grade PARCC EOY Practice Assessment Item #22: Standard 5.NBT.7-1**

Enter your answer in the box.

$5.63 + 14.37 =$ [_____]

Kurt drew a rectangular maze with a length of $\frac{3}{4}$ foot and a width of $\frac{5}{12}$ foot.

What is the area, in square feet, of Kurt's maze? Enter your answer in the space provided. Enter **only** your fraction.

Drag and drop the expression that matches each statement into the correct box.
Each expression may be used more than once or not at all.

| 2 + 4 - 9 | 9 - 2 + 4 | 9 - ( 2 + 4 ) |

|  |  |  |
|---|---|---|
| the sum of 2 and 4 subtracted from 9 | add 2 and 4, then subtract 9 | subtract 2 from 9, then add 4 |

Enter the correct answer in the space provided.

$\frac{5}{6} \times \frac{9}{10} =$

Mia is playing several rounds of a word game. Each coordinate pair shows the number of the round and Mia's score for that round. She is keeping track of these coordinate pairs on a graph.

- Round 1: (1, 3)
- Round 2: (2, 6)
- Round 3: (3, 3)

## Part A

Graph Mia's scores for the first three rounds of play. Select the "Point A" button and plot Round 1. Select the "Point B" button and plot Round 2. Select the "Point C" button and plot Round 3. Be sure to graph all three points.

Point A
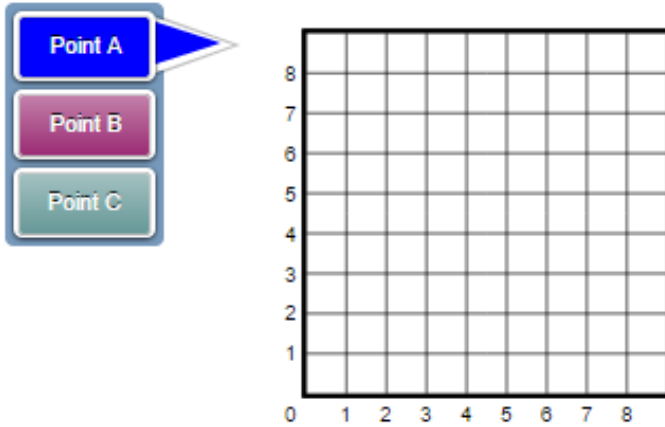
Point B

Point C

## Part B

In Round 4, Mia scores the same number of points as in Rounds 2 and 3 combined.

What is the coordinate pair that represents Mia's score for Round 4?

- A. (4, 5)

- B. (9, 4)

- C. (5, 4)

- D. (4, 9)

Enter your answer in the box.

$1,534 \div 26 =$ [ ]

**5th Grade PARCC EOY Practice Assessment Item #28: Standard 5.MD.1-1**

Complete each conversion by dragging and dropping the correct number into the box.

| 0.07 | 0.7 | 70 | 700 | 7000 |

7 mm = [____] cm

7 cm = [____] m

[____] m = 7 km

Mr. Edwards is making sandwitches. He has 4 pounds of cheese. He puts $\frac{1}{8}$ pound of cheese in each sandwich.

What is the total number of sandwiches Mr. Edwards made using all 4 pounds of cheese?

Enter your answer in the box.

|  |
|---|

sandwiches

There are two tanks at the aquarium, Tank A and Tank B. Each tank has two sections.

## Part A

The volume of one section of Tank A is 24-cubic feet. The volume of the other section of Tank A is 96-cubic feet.

What is the total volume, in cubic feet, of Tank A?

○ A. 4

○ B. 72

○ C. 120

○ D. 2,304

## Part B

Tank B has the same volume as Tank A.

The volume of one section of Tank B is 45-cubic feet. What is the volume, in cubic feet, of the other section of Tank B?

Enter your answer in the box.

|                        | cubic feet |

Choose **three** statements that correctly describe the coordinate system.

- ☐ A. The *x*- and *y*-axes intersect at 10.

- ☐ B. The *x*- and *y*-axes intersect at the origin.

- ☐ C. The *x*- and *y*-axes are parallel number lines.

- ☐ D. The *x*- and *y*-axes are perpendicular number lines.

- ☐ E. The *x*- and *y*-coordinates are used to locate points in the coordinate plane.

Which statement about the corresponding terms in both Pattern
A and Pattern B is always true?

Pattern A: 0, 5, 10, 15, 20, 25, 30

Pattern B: 0, 10, 20, 30, 40, 50, 60

- A. Each term in Pattern A is 2 times the corresponding
  term in Pattern B.

- B. Each term in Pattern A is $\frac{1}{2}$ times the corresponding
  term in Pattern B.

- C. Each term in Pattern A is 5 less than the
  corresponding term in Pattern B.

- D. Each term in Pattern A is 10 less than
  the corresponding term in Pattern B.

Part A

A company sells phones for $515.00 each.

What is the total amount of money the company earns from selling 856 phones?

Enter your answer in the box.

$ [                    ]

Part B

The parts to build these phones cost $189.00 for each phone.

What is the total cost of parts to build 856 phones?

Enter your answer in the box.

$ [                    ]

Enter your answer in the box.

$371 \times 2{,}584 =$ [                    ]

**5ᵗʰ Grade PARCC EOY Practice Assessment Item #36: Standard 5.NBT.5**

Enter your answer in the box.

$625 \times 847 =$