**BelovED Community Charter School**

# Math 7

# Summer Packet

**2021**

***Name:*** _____

***BelovED Community Charter School***
**Middle School Mathematics Department**
508 Grand St.
Jersey City, NJ 07302

June 2021

Dear Parents and Guardians:

Attached are the summer curriculum review materials for your scholar entering Math 7. This booklet was prepared by the BelovED Community Charter School Middle School Math Department and contains topics that reflect content learned in prerequisite courses. These materials must be completed and brought to class on the first day of school in September.

Your child is required to complete this booklet over the summer. Completion of the packet on time with work shown will count as a 100% test grade on the first day of school to be added to your Quarter 1 average.

This packet should be completed with a calculator. In the event that you need assistance with this work, please search for instructional videos at www.khanacademy.org.

Thank you for your cooperation.

Sincerely,

Ms. Victoria de Leon
Academic Dean

Mrs. Didi Martín
Dean of Students

1.

A class of 25 students shares a class set of 100 markers. On a day with 5 students absent, which statement is true?

**A.** For every 5 students, there is 1 marker.

**B.** For every 4 students, there is 1 marker.

**C.** For each student, there are 4 markers.

**D.** For each student, there are 5 markers.

2. Which question is a statistical question?

**A.** How tall is the oak tree?

**B.** How much did the tree grow in one year?

**C.** What are the heights of the oak trees in the schoolyard?

**D.** What is the difference in height between the oak tree and the pine tree?

Which expression represents "6 more than $x$"?

**A.** $x - 6$

**B.** $6 \cdot x$

**C.** $x + 6$

**D.** $6 - x$

3.

There are 5,280 feet in 1 mile. How many inches are in 2 miles?

**A.** 10,560

**B.** 63,360

**C.** 126,720

**D.** 253,440

5. The area of a rectangular patio is $5\frac{5}{8}$ square yards, and its length is $1\frac{1}{2}$ yards. What is the patio's width, in yards?

**A.** $3\frac{3}{4}$

**B.** $4\frac{1}{8}$

**C.** $7\frac{1}{8}$

**D.** $8\frac{7}{16}$

6. What is the greatest common factor of 16 and 48?

Enter your answer in the box.

7 Select each expression that is equivalent to $3(n + 6)$.

Which equations with exponential expressions are true?

Select **all** that apply.

**A.** $3^3 = 3 \cdot 3$

**B.** $5^2 = 5 \cdot 5$

**C.** $5^4 = 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4$

**D.** $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 = 6^7$

**E.** $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 = 7^6$

**F.** $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 = 7^7$

8. Enter your answer in the box.

$33.8 \div 32.5 =$

9. Let $x$ represent any number in the set of even integers greater than 1.

Which inequality is true for all values of $x$?

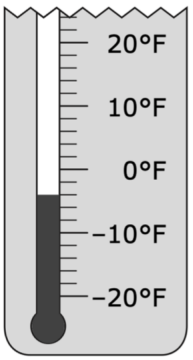
**A.** $x < 0$

**B.** $x > 0$

**C.** $x < 4$

**D.** $x > 4$

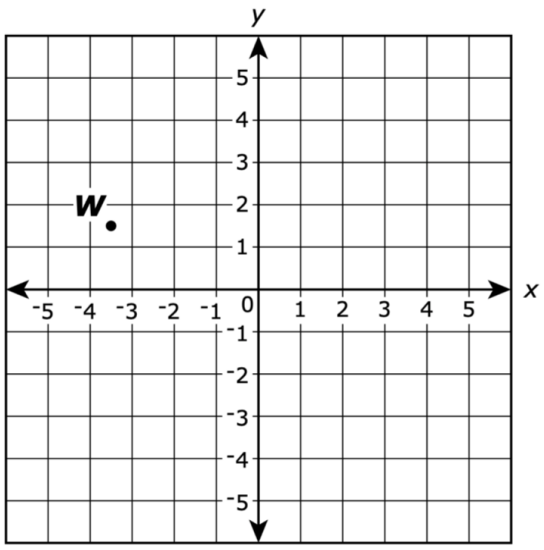
10. The picture shows part of a thermometer measuring temperature in degrees Fahrenheit.




What is the temperature, in degrees Fahrenheit, shown on the thermometer to the nearest integer?

Enter your integer answer in the box.

11. This coordinate plane shows the location of point *W*.




What is the value of the *x*-coordinate of point *W*? Enter your answer as a decimal to the nearest 0.5.

Enter your answer in the box.

12 These five rational numbers are plotted on a horizontal number line.

$$-\frac{2}{3}, \frac{7}{8}, -\frac{4}{5}, \frac{7}{10}, -\frac{4}{3}$$

Which statement about the locations on the number line of the rational numbers is true?

**A.** $-\frac{2}{3}$ is farthest to the left, and $\frac{7}{8}$ is farthest to the right.

**B.** $-\frac{4}{3}$ is farthest to the left, and $\frac{7}{8}$ is farthest to the right.

**C.** $-\frac{2}{3}$ is farthest to the left, and $\frac{7}{10}$ is farthest to the right.

**D.** $-\frac{4}{3}$ is farthest to the left, and $\frac{7}{10}$ is farthest to the right.

13. .

Brianna's teacher asks her which of these three expressions are equivalent to each other.

Expression A: $9x - 3x - 4$

Expression B: $12x - 4$

Expression C: $5x + x - 4$

Brianna says that all three expressions are equivalent because the value of each one is $-4$ when $x = 0$.

20.

Brianna's thinking is incorrect.

- Identify the error in Brianna's thinking.
- Determine which of the three expressions are equivalent.
- Explain or show your process in determining which expressions are equivalent.

Enter your answers and your explanation or process in the space provided.

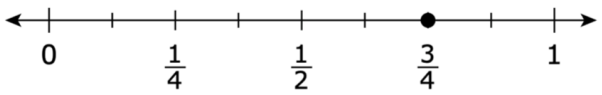
Chad drove 168 miles in 3 hours.

**21. Part A**

How many miles per hour did Chad drive?

Enter your answer in the box.

This diagram shows a number line.




**24. Part A**

James has a board that is $\frac{3}{4}$ foot long. He wants to cut the board into pieces that are each $\frac{1}{8}$ foot long.

How many pieces can James cut from the board? Explain how James can use the number line diagram to determine the number of pieces he can cut from the board.

Enter your answer and your explanation in the space provided.

Greg bought 4 notebooks for $6.40.

**25. Part A**

Which equation can be used to determine the price, $p$, in dollars, of 1 notebook?

**A.** $\frac{p}{4} = 6.40$

**B.** $\frac{p}{6.40} = 4$

**C.** $4p = 6.40$

**D.** $6.40p = 4$

**Part B**

What is the price, in dollars, of 1 notebook?

Enter your answer in the box.

A group of hikers buys 8 bags of mixed nuts. Each bag contains $3\frac{1}{2}$ cups of mixed nuts. The mixed nuts are shared evenly among 12 hikers. How many cups of mixed nuts will each hiker receive? Show your work or explain your answer.

Enter your answer and your work or explanation in the space provided.

The number of blueberry muffins that a baker makes each day is 40% of the total number of muffins she makes.

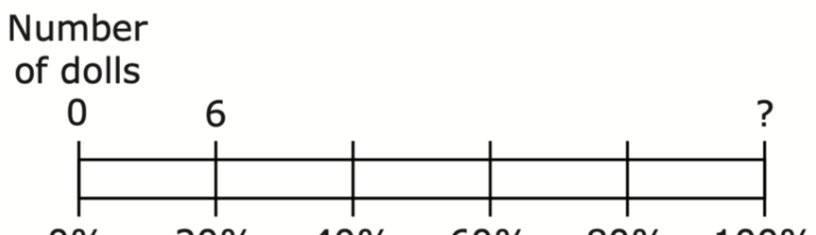
**22. Part A**

On Monday, the baker makes 36 blueberry muffins.

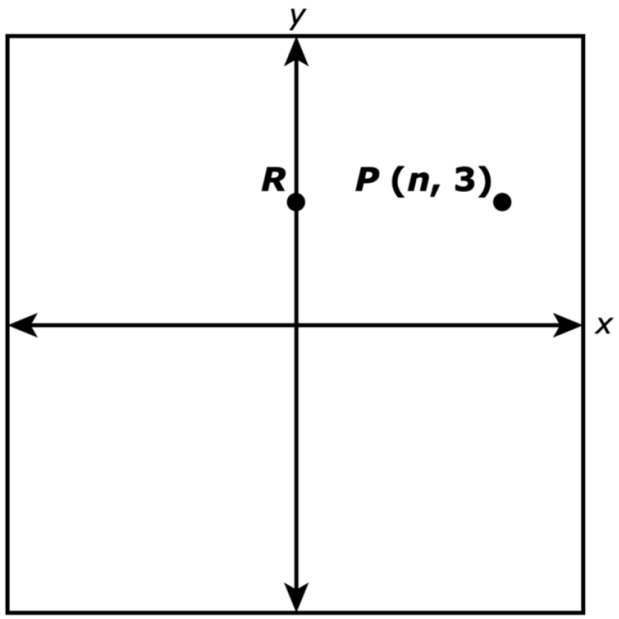
What is the total number of muffins that the baker makes on Monday?

Enter your answer in the box.

Anita brings 6 dolls to her grandma's house. These dolls represent 20% of Anita's doll collection, as shown in the diagram.



The graph shows the location of point $P$ and point $R$. Point $R$ is on the $y$-axis and has the same $y$-coordinate as point $P$.




Point $Q$ is graphed at $(n, -2)$. The distance from point $P$ to point $Q$ is equal to the distance from point $P$ to point $R$.

What is the distance from point $P$ to point $Q$? What is the value of $n$? Explain how you determined the distance from point $P$ to point $Q$, and the value of $n$.

Enter your answers and your explanations in the space provided.