



BeloveED Community Charter School
Middle School Academy

Entering 6th Grade
Math Summer 2023 Packet



Name: _____

Middle School Mathematics Department
508 Grand St.
Jersey City, NJ 07302

Entering 6th Grade
2023 Summer Math Packet



June 2023

Dear rising 6th graders and families,

This packet contains math practice problems for you to complete over the summer. The BelovED Community Charter School Middle School Math Department prepared the packets and selected topics that are prerequisites for the math course you will take during the 2023-2024 school year.

Each section of the packet contains the title of the associated Khan academy unit. You can find examples and additional practice problems by searching the unit title in the Khan Academy search engine at www.khanacademy.org.

This packet must be completed and brought to math class on the first day of school in September. Completion of the packet on time with all work shown will result in a 100% test grade during the first week of school. This will contribute to your Quarter 1 average.

Complete this packet **WITHOUT A CALCULATOR** and be sure to **SHOW ALL WORK** for every problem. We are looking forward to an excellent 2023-2024 school year!

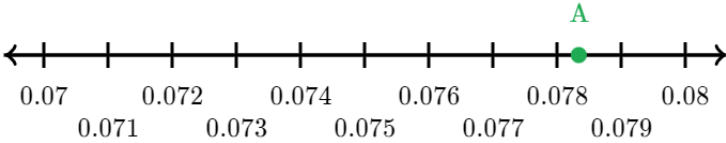
Thank you,

Ms. Camille Sanchez
Middle School Math Department Chair



NO CALCULATOR- SHOW ALL WORK IN BOX

Khan academy unit: Decimal place value

| | |
|----|---|
| 1. | <p>What is A rounded to the nearest thousandth?</p>  <p><input type="text"/></p> <p>What is A rounded to the nearest hundredth?</p> <p><input type="text"/></p> |
| 2. | <p>At a frisbee-throwing competition, one contestant threw a frisbee 113.47 meters.</p> <p>Round the distance to the nearest meter.</p> <p><input type="text"/> meters</p> |
| 3. | <p>Kesia is writing a report about two of the world's fastest fish. She wants to put the faster fish on the cover of her report. The fastest speed for a sailfish is 67.85 mph. The fastest speed for a swordfish is 60 mph.</p> <p>Which fish should go on the cover of Kesia's report?</p> <p>Choose 1 answer:</p> <p><input type="radio"/> A Sailfish</p> <p><input type="radio"/> B Swordfish</p> |



4.

What could be the value of the point graphed on the number line?



Choose 1 answer:

(A) 0.462

(B) 0.072

(C) 0.037

5.

The digit 8 in which number represents a value of 0.08?

Choose 1 answer:

(A) 9,280

(B) 0.784

(C) 65.81



Khan academy unit: Add and subtract decimals

| | |
|----|--|
| 6. | <p>Estimate.</p> $3.14 + 5.92 \approx$ <p>Choose 1 answer:</p> <p>_____</p> <p>(A) 7</p> <p>_____</p> <p>(B) 8</p> <p>_____</p> <p>(C) 9</p> <p>_____</p> <p>(D) 10</p> <p>_____</p> |
| 7. | <p>Add.</p> $52.83 + 34.55 = \boxed{}$ |
| 8. | <p>Subtract.</p> $\boxed{} = 57.6 - 5.9$ |



9.

Estimate.

$$7.7 - 3.11 \approx$$

Choose 1 answer:

(A) 0

(B) 2

(C) 5

(D) 8

Khan academy unit: Add and subtract fractions

10.

Nevio mixed $\frac{5}{8}$ L of water with $\frac{1}{4}$ L of orange juice.

Select the true statement about the amounts of liquid Nevio mixed.

Choose 1 answer:

(A) Both fractions are almost 1 whole.

(B) One fraction is about $\frac{1}{2}$ and the other is less than $\frac{1}{2}$.

Select the best estimate for the total amount of liquid Nevio mixed.

Choose 1 answer:

(A) $\frac{1}{2}$ L

(B) 1 L

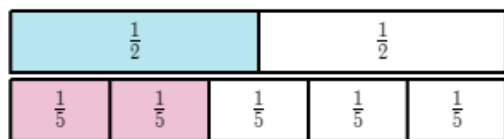
(C) 2 L



11.

Add.

$$\frac{1}{2} + \frac{2}{5} = \boxed{}$$



12.

Find the missing fraction.

$$\frac{1}{2} + \boxed{} = \frac{7}{8}$$

13.

Subtract.

$$6\frac{1}{4} - 3\frac{5}{8} = \boxed{}$$



| 14. | <p>The results of an election are shown in the table below.</p> <table border="1"><thead><tr><th>Candidate</th><th>Fraction of votes</th></tr></thead><tbody><tr><td>Johnson</td><td>$\frac{1}{9}$</td></tr><tr><td>Smith</td><td>$\frac{7}{18}$</td></tr><tr><td>Dragovic</td><td>$\frac{1}{2}$</td></tr></tbody></table> <p>What is the difference between the fractions of votes received by Dragovic and Johnson?</p> <input type="text"/> | Candidate | Fraction of votes | Johnson | $\frac{1}{9}$ | Smith | $\frac{7}{18}$ | Dragovic | $\frac{1}{2}$ |
|-----------|---|-----------|-------------------|---------|---------------|-------|----------------|----------|---------------|
| Candidate | Fraction of votes | | | | | | | | |
| Johnson | $\frac{1}{9}$ | | | | | | | | |
| Smith | $\frac{7}{18}$ | | | | | | | | |
| Dragovic | $\frac{1}{2}$ | | | | | | | | |
| 15. | <p>At the party, Aisha and her friends ate $2\frac{1}{2}$ pizzas. After the party, there were $1\frac{1}{8}$ pizzas left.</p> <p>How many pizzas were there at the start of the party?</p> <input type="text"/> pizzas | | | | | | | | |
| 16. | <p>Ali ran $\frac{3}{10}$ km before school. After school, she ran $\frac{1}{5}$ km.</p> <p>Determine a reasonable estimate for the total distance Ali ran.</p> <p>Choose 1 answer:</p> <p>_____</p> <p><input type="radio"/> (A) About $\frac{1}{2}$ km</p> <p>_____</p> <p><input type="radio"/> (B) About 1 km</p> <p>_____</p> <p><input type="radio"/> (C) About $1\frac{1}{2}$ km</p> <p>_____</p> | | | | | | | | |



Khan academy unit: Multi-digit multiplication and division

| | |
|-----|---|
| 17. | <p>Which of the following correctly multiplies 409×7 using the standard algorithm?</p> <p>Choose 1 answer:</p> <hr/> <p>(A) $\begin{array}{r} 16 \\ 409 \\ \times 7 \\ \hline 2,933 \end{array}$</p> <hr/> <p>(B) $\begin{array}{r} 6 \\ 409 \\ \times 7 \\ \hline 2,863 \end{array}$</p> <hr/> <p>(C) $\begin{array}{r} 6 \\ 409 \\ \times 7 \\ \hline 2,803 \end{array}$</p> |
| 18. | <p>Multiply.</p> $\begin{array}{r} 5,844 \\ \times 20 \\ \hline \end{array}$ <div style="border: 1px solid black; width: 100px; height: 20px; margin-left: 20px;"></div> |



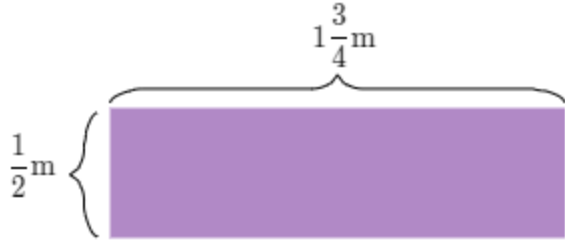
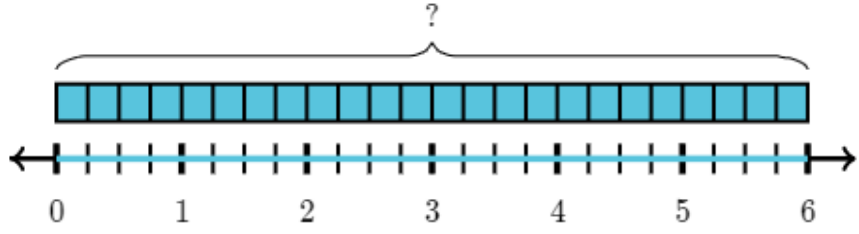
| | |
|-----|---|
| 19. | <p>Estimate.</p> $4,611 \div 21 \approx$ <p>Choose 1 answer:</p> <p>_____</p> <p>(A) 2</p> <p>_____</p> <p>(B) 20</p> <p>_____</p> <p>(C) 25</p> <p>_____</p> <p>(D) 250</p> <p>_____</p> |
| 20. | <p>Divide.</p> <p>104 \div 16 = <input type="text"/> remainder <input type="text"/></p> |
| 21. | <p>Divide.</p> $360 \div 90 = \text{}$ |



Khan academy unit: Multiply and divide fractions

| 22. | <p>A rectangular flying carpet is $1\frac{1}{2}$ meters wide and 2 meters long. What is the area of the carpet?</p> <p><input type="text"/> m²</p> | | | | | | | | | | | | | | | | |
|-------------------------|---|-----------------------|----------------------------|-------------|-----------------|-------------------------|-----------------------|-----------------------|-----------------------|-------------------------|-----------------------|-----------------------|-----------------------|-------------------------|-----------------------|-----------------------|-----------------------|
| 23. | <p>Bill paints murals. He recorded the total amount of white paint that he used for his murals each month in the table below.</p> <p>In April, Bill used $\frac{2}{3}$ of the amount that he used in March.</p> <p>Fill in the amount of white paint Bill used in April in the table below.</p> <table border="1" data-bbox="305 924 717 1171"> <thead> <tr> <th>Month</th> <th>Liters of white paint used</th> </tr> </thead> <tbody> <tr> <td>March</td> <td>$\frac{4}{5}$</td> </tr> <tr> <td>April</td> <td><input type="text"/></td> </tr> <tr> <td>May</td> <td>$1\frac{1}{4}$</td> </tr> </tbody> </table> | Month | Liters of white paint used | March | $\frac{4}{5}$ | April | <input type="text"/> | May | $1\frac{1}{4}$ | | | | | | | | |
| Month | Liters of white paint used | | | | | | | | | | | | | | | | |
| March | $\frac{4}{5}$ | | | | | | | | | | | | | | | | |
| April | <input type="text"/> | | | | | | | | | | | | | | | | |
| May | $1\frac{1}{4}$ | | | | | | | | | | | | | | | | |
| 24. | <p>Is the product of each expression less than, equal to, or greater than 85?</p> <table border="1" data-bbox="305 1360 1026 1755"> <thead> <tr> <th></th> <th>Less than 85</th> <th>Equal to 85</th> <th>Greater than 85</th> </tr> </thead> <tbody> <tr> <td>$\frac{3}{4} \times 85$</td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> <tr> <td>$\frac{2}{3} \times 85$</td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> <tr> <td>$\frac{5}{5} \times 85$</td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> </tbody> </table> | | Less than 85 | Equal to 85 | Greater than 85 | $\frac{3}{4} \times 85$ | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | $\frac{2}{3} \times 85$ | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | $\frac{5}{5} \times 85$ | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | Less than 85 | Equal to 85 | Greater than 85 | | | | | | | | | | | | | | |
| $\frac{3}{4} \times 85$ | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | |
| $\frac{2}{3} \times 85$ | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | |
| $\frac{5}{5} \times 85$ | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | | | | | | | | | | |



| | |
|------------|--|
| <p>25.</p> | <p>Find the area of the rectangle.</p>  <p>$\frac{1}{2}\text{m}$</p> <p>$1\frac{3}{4}\text{m}$</p> <p><input type="text"/> m^2</p> |
| <p>26.</p> | <p>If 6 is divided into pieces that are each $\frac{1}{4}$ of a whole, how many pieces are there?</p> <p><math>6 \div \frac{1}{4} = \text{<input type="text"/></math></p>  |
| <p>27.</p> | <p>Mrs. Amy has 5 bunches of grapes, which she is serving as a snack to a group of children. Each serving is $\frac{1}{4}$ of a bunch.</p> <p>How many children can get a serving of grapes as a snack?</p> <p><input type="text"/> children</p> |



| | |
|-----|---|
| 28. | <p>The Hernandez family is evenly splitting 7 liters of gasoline between their 4 cars.</p> <p>How many liters of gasoline should each car get?</p> <p>Choose 1 answer:</p> <hr/> <p>(A) $\frac{4}{7}$ liters of gasoline</p> <hr/> <p>(B) $1\frac{2}{4}$ liters of gasoline</p> <hr/> <p>(C) $1\frac{1}{4}$ liters of gasoline</p> <hr/> <p>(D) $1\frac{3}{4}$ liters of gasoline</p> <hr/> |
|-----|---|

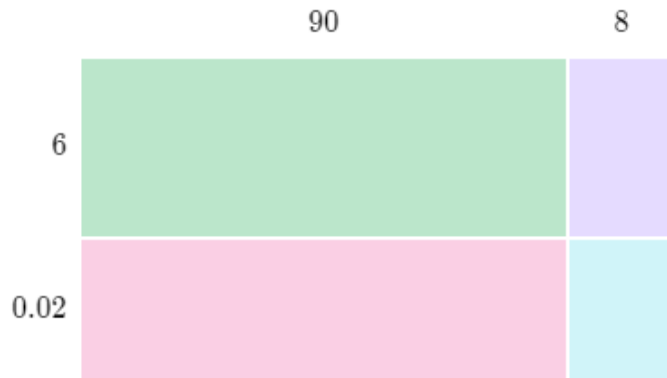
Khan academy unit: Multiply and divide decimals

| | |
|-----|--|
| 29. | <p>Multiply.</p> <p><input type="text"/> = 0.3×0.2</p> |
| 30. | <p>Multiply.</p> <p><input type="text"/> = 1.2×7.7</p> |



31.

The figure is not to scale.



What multiplication expression could the area model above represent?

Choose 1 answer:

(A) 98×6.02

(B) 90.8×6.02

(C) 90.8×6.2

(D) 6.2×98

32.

Express your answer as a decimal.

$9 \div 45 =$



33.

Estimate.

$$49.87 \div 10 \approx$$

Choose 1 answer:

(A) 5

(B) 50

(C) 500

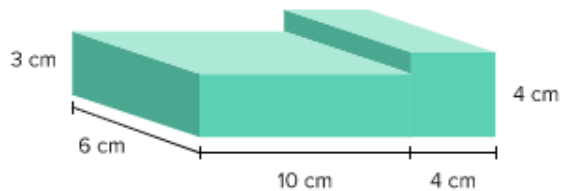
(D) 5,000

Khan academy unit: Volume

34.

The figure below is made of 2 rectangular prisms.

What is the volume of this figure?

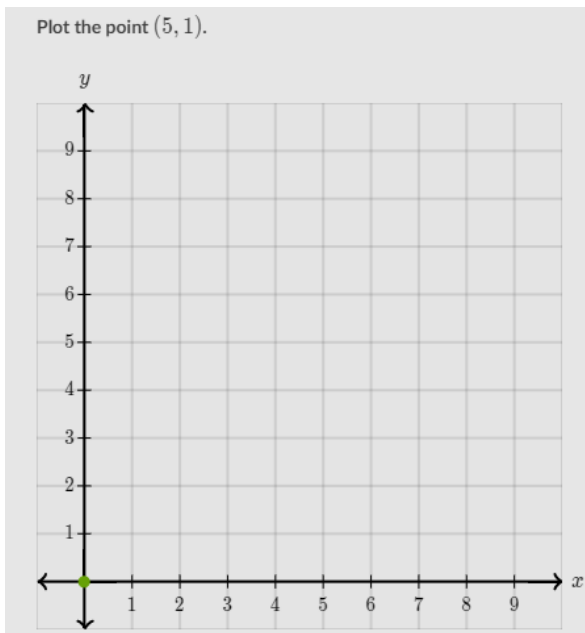


cubic cm

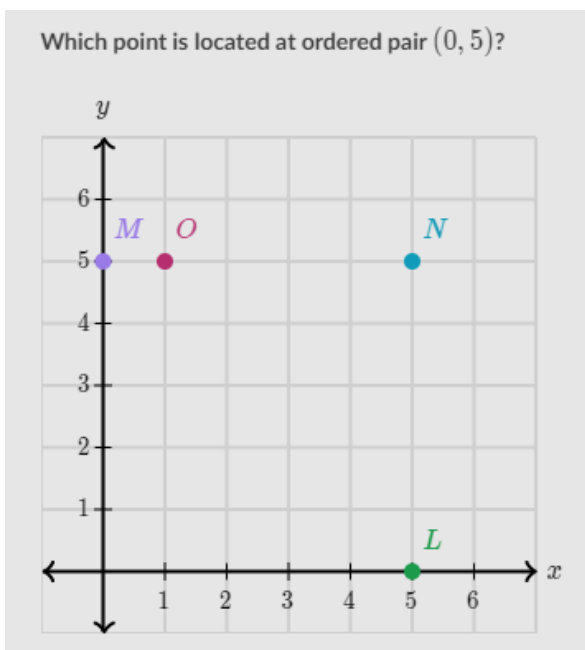


Khan academy unit: Coordinate plane

35.



36.

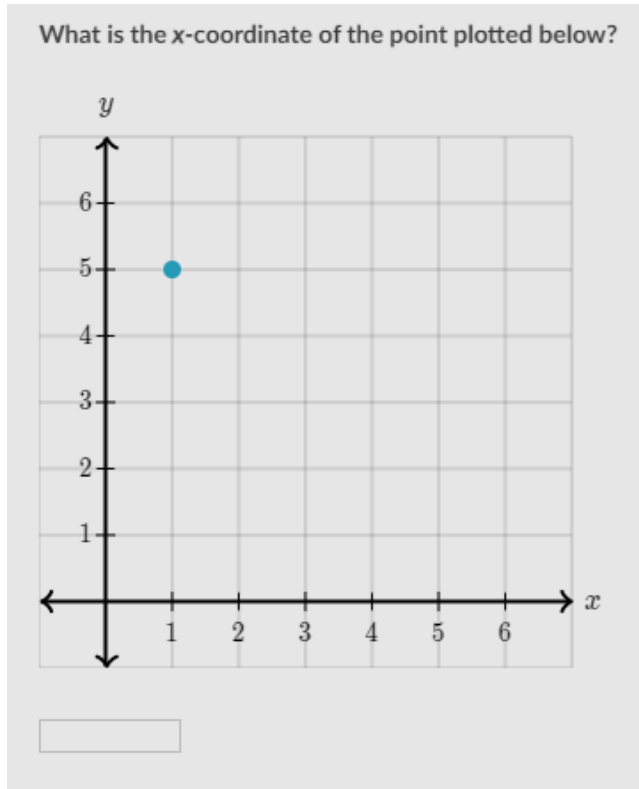


Choose 1 answer:

- (A) Point L
- (B) Point M
- (C) Point N
- (D) Point O



37.



Khan academy unit: Algebraic thinking

38.

Which problem could be solved with the expression $32 \div (3 + 1)$?

Choose 1 answer:

- (A) Betty has 32 students she tutors. She got 3 additional students. She then advertised and got one more student. How many students does she have now?
- (B) Greg has 32 toys. He decides to split the toys evenly between him and his 3 brothers. How many toys would each boy receive?
- (C) Allie builds furniture. She built 32 chairs. She sold 3 chairs and broke one. How many chairs does she have left?



39.

Which rule describes the relationship between the input and output pairs in the following table?

| Input | Output |
|-------|--------|
| 5 | 11 |
| 7 | 15 |
| 9 | 19 |

Choose 1 answer:

- _____
- (A) Add 10 to the input to get the output.
- _____
- (B) Multiply the input by 2. Then add 1 to the result to get the output.
- _____
- (C) Multiply the input by 3. Then subtract 4 from the result to get the output.
- _____