

# Summer 2020 Packet

## Incoming 7<sup>th</sup> Grade

### Mathematics

Summer break is a great time to rest and relax from a hardworking school year. However, it is important to work out our brains periodically throughout the summer. This packet is your summer math assignment. These questions were chosen based on the work you did as 6<sup>th</sup> graders. You will be graded on your *effort, completeness and quality of work*. We recommend you take your time and spread out the assignment throughout the summer.

As always, make sure to show all of your work (yes, even on multiple choice) and do your absolute best. If you have any questions, please do not hesitate to contact us.

#### **PART ONE.**

##### Multiple Choice

You will answer 15 multiple choice questions. Make sure to show your work and fill in the scan sheet attached.

##### Checklist:

- I showed all of my work neatly when possible.
- I filled out my scan sheet.
- I did my absolute best and am proud of the work I did.

#### **PART TWO.**

##### Tasks

You will answer four tasks. Make sure to show all of your work and answer in a complete sentence.

##### Checklist:

- I showed all of my work neatly and organized.
- I used proper units when necessary.
- I answered in a complete sentence.
- I did my absolute best and am proud of the work I did.

Summer Packet Incoming 7th Grade

Name: \_\_\_\_\_

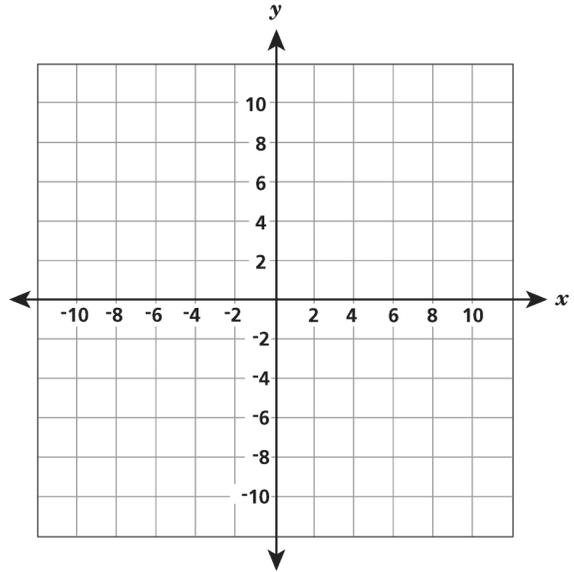
Date: \_\_\_\_\_

1. Omar has  $2\frac{3}{4}$  cups of dough to make dumplings. If he uses  $\frac{3}{16}$  cup of dough for each dumpling, how many whole dumplings can Omar make?
- A. 13      B. 14      C. 15      D. 16

2. What is the value of  $\frac{5}{6} \div \frac{3}{7}$ ?
- A.  $\frac{15}{42}$       B.  $\frac{18}{35}$       C.  $\frac{35}{18}$       D.  $\frac{42}{15}$

3. Keith wants to plot  $-8$  and  $-9$  on a number line. Which statement is true?
- A. Keith should plot  $-8$  to the left of  $-9$  because  $-8 < -9$ .
- B. Keith should plot  $-8$  to the left of  $-9$  because  $-8 > -9$ .
- C. Keith should plot  $-9$  to the left of  $-8$  because  $-9 < -8$ .
- D. Keith should plot  $-9$  to the left of  $-8$  because  $-9 > -8$ .

4. The endpoints of a line segment can be represented on a coordinate grid by the points  $A(-4, 1)$  and  $C(-4, -3)$ . Graph and label each of the endpoints of the line segment on the coordinate grid below.



What is the distance, in units, between point  $A$  and point  $C$ ?

5. What is the greatest common factor of 36 and 90?
- A. 6      B. 18      C. 36      D. 180

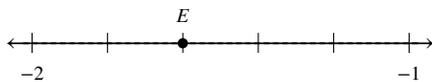
6. Carol has  $1\frac{5}{8}$  cups of yogurt to make smoothies. Each smoothie uses  $\frac{1}{3}$  cup of yogurt.

What is the maximum number of smoothies that Carol can make with the yogurt?

- A. 1      B. 4      C. 5      D. 7

7. An art teacher has a total of  $\frac{7}{8}$  pound of clay. The teacher puts  $\frac{1}{16}$  pound of clay at each work station. The teacher sets up an equal number of work stations in each of 2 classrooms. How many work stations does the teacher set up in each of the classrooms?

8. Which number best represents the location of point  $E$  on the number line below?



- A. -1.8      B. -1.6      C. -1.5      D. -1.3

9. The area of a rectangular park is  $\frac{3}{5}$  square mile. The length of the park is  $\frac{7}{8}$  mile. What is the width of the park?

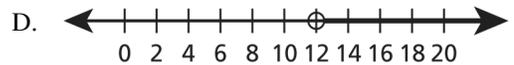
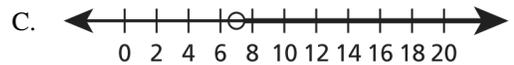
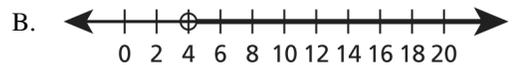
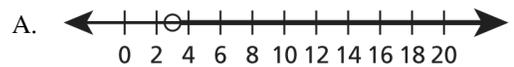
10. An art teacher had  $\frac{2}{3}$  gallon of paint to pour into containers. If he poured  $\frac{1}{8}$  gallon of paint into each container until he ran out of paint, how many containers had paint in them, including the one that was partially filled?

- A. 1      B. 3      C. 5      D. 6

11. Kelly saves \$5 every week. Which expression represents the amount of money, in dollars, Kelly will save in  $w$  weeks?

- A.  $5 + w$       B.  $5 - w$       C.  $5w$       D.  $\frac{5}{w}$

12. A printer makes more than 3 copies of a book every hour. Which graph represents the number of books made in 4 hours?



13. What is the solution of the equation below?

$$x + 8.63 = 11.001$$

- A.  $x = 19.631$                       B.  $x = 10.138$   
C.  $x = 3.471$                         D.  $x = 2.371$

14. Which expression is equivalent to  $5(4x + 3) - 2x$ ?

- A.  $18x + 15$                       B.  $18x + 3$   
C.  $7x + 8$                          D.  $2x + 8$

15. Which expression represents the phrase below?

8 less than the product of 6 and a number,  $x$

- A.  $8 - 6x$                          B.  $6x - 8$   
C.  $(6 + x) - 8$                     D.  $8 - (6 + x)$

Name			
Date		Period	

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2	<input type="radio"/>		12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
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Test Version: A  B  C  D

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## This will be the rubric we will use to grade the tasks.

### 3-Point Holistic Rubric

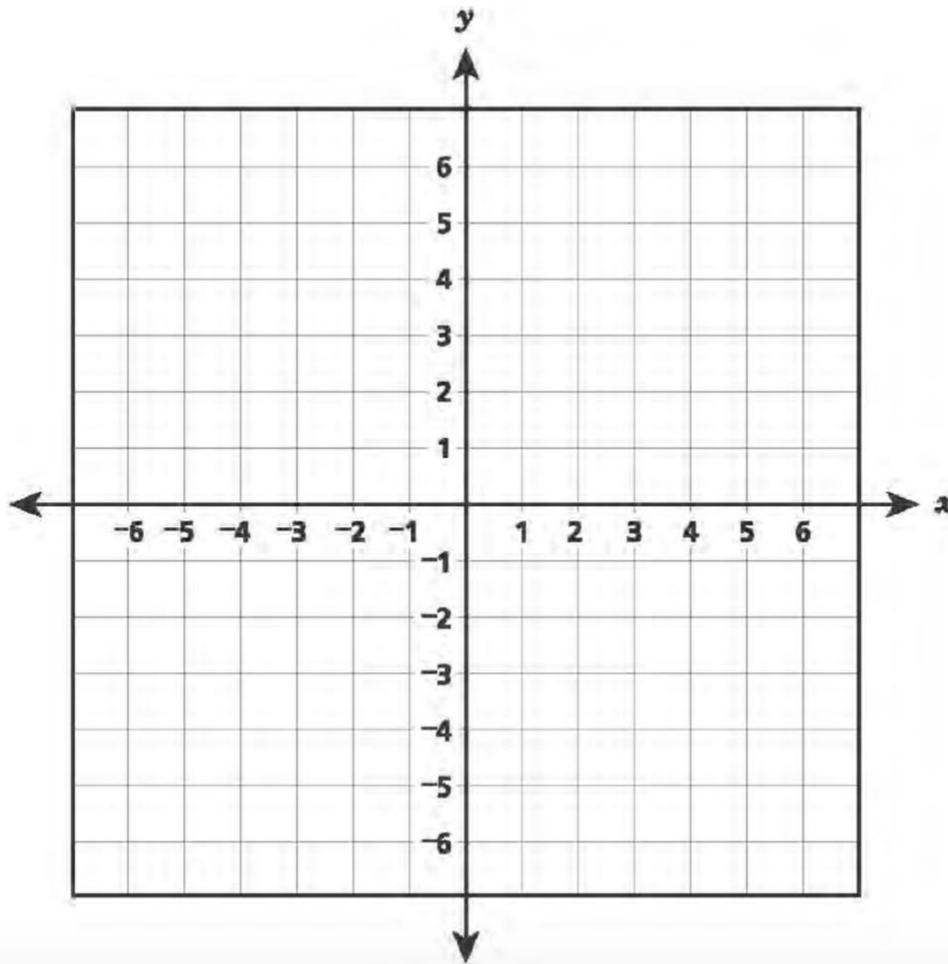
Score Points:

<b>3 Point</b>	<p>A three-point response includes the correct solution(s) to the question and demonstrates a thorough understanding of the mathematical concepts and/or procedures in the task.</p> <p>This response</p> <ul style="list-style-type: none"><li>• indicates that the student has completed the task correctly, using mathematically sound procedures</li><li>• contains sufficient work to demonstrate a thorough understanding of the mathematical concepts and/or procedures</li><li>• may contain inconsequential errors that do not detract from the correct solution(s) and the demonstration of a thorough understanding</li></ul>
<b>2 Point</b>	<p>A two-point response demonstrates a partial understanding of the mathematical concepts and/or procedures in the task.</p> <p>This response</p> <ul style="list-style-type: none"><li>• appropriately addresses most, but not all aspects of the task using mathematically sound procedures</li><li>• may contain an incorrect solution but provides sound procedures, reasoning, and/or explanations</li><li>• may reflect some minor misunderstanding of the underlying mathematical concepts and/or procedures</li></ul>
<b>1 Point</b>	<p>A one-point response demonstrates only a limited understanding of the mathematical concepts and/or procedures in the task.</p> <p>This response</p> <ul style="list-style-type: none"><li>• may address some elements of the task correctly but reaches an inadequate solution and/or provides reasoning that is faulty or incomplete</li><li>• exhibits multiple flaws related to misunderstanding of important aspects of the task, misuse of mathematical procedures, or faulty mathematical reasoning</li><li>• reflects a lack of essential understanding of the underlying mathematical concepts</li><li>• may contain the correct solution(s) but required work is limited</li></ul>
<b>0 Point*</b>	<p>A zero-point response is incorrect, irrelevant, incoherent, or contains a correct solution obtained using an obviously incorrect procedure. Although some elements may contain correct mathematical procedures, holistically they are not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.</p>

\*Condition Code A is applied whenever a student who is present for a test session leaves an entire constructed-response question in that session completely blank (no response attempted).

## Task I

The coordinate grid below represents a town. Curtis's house is at  $(-4, -6)$  and Jean's house is at  $(-4, -3)$ . Plot the points where Curtis's house and Jean's house are located.

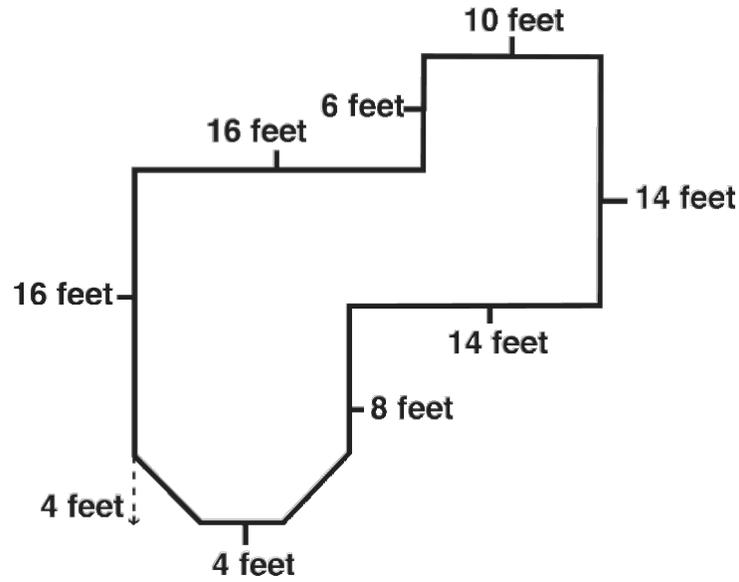


Each unit on the grid represents 1 mile. If Curtis can ride his bike at a constant rate of 12 miles per hour, how many minutes would it take Curtis to ride from his house to Jean's house?

## Task II

An Architect Needed! Your Aunt Lucy has decided to refloor the downstairs of her house, and she wants you to help her out. She knows that you have been assuming the role of an architect within your math class and thinks you can handle the job.

Below are the dimensions of her downstairs:



She is looking to purchase square tiles with a side length of 15 inches and a cost of \$15.55 per tile. How many tiles should she order (assuming all cut tiles will be used)? What would be the material cost for the entire downstairs?

### **Task III**

Charmin® Choices Lately I have been buying toilet paper made from recycled paper at an environmental store, but last night we ran out, so I stopped at the local grocery store to pick up a roll. It has been a while since I shopped in the "bath tissue" aisle of a supermarket and I was unprepared for the number of choices available! I used to buy Charmin® brand and I was surprised to discover that it is now possible to buy white Charmin® in 8 different packages. I have listed the choices below. Please help me decide which is the best choice, as I was overwhelmed!

#### **4-Roll Packages:**

Ultra Charmin®: 2-ply with 170 sheets per roll costs \$1.29/pkg.

Ultra Charmin®: 1-ply with 560 sheets per roll costs \$2.49/ pkg.

Ultra Charmin® Double: 2-ply with 340 sheets per roll costs \$2.49/ pkg.

#### **6-Roll Packages:**

Charmin® Free: 1-ply with 280 sheets per roll costs \$1.98/ pkg.

Charmin® Plus: 1-ply with 170 sheets per roll costs \$1.98/ pkg.

Charmin® Ultra: 1-ply with 170 sheets per roll costs \$1.98/ pkg.

#### **9-Roll Packages:**

Charmin® Big Squeeze: 2-ply with 420 sheets per roll costs \$4.59/pkg.

Charmin® Ultra Big Squeeze: 2-ply with 260 sheets per roll costs \$4.59/pkg.