

BBCS Summer Math Packet

For Students Entering Math 5

Welcome to 5th Grade Mathematics! Since you will be taking *5th Grade Mathematics* after successful completion of 4th Grade Mathematics, the *5th GRADE PREPARATION PACKET* contains review material of the 4th grade concepts, skills, and procedures that taught in 4th grade.

The purpose of this packet is to help you maintain the math skills you have studied so far. We suggest that you **not** begin this packet until the middle of July. This will better serve as a refresher course before school begins in August.

The packet should be completed over the course of several days, not in one day. A few tips that should help you to remember how to solve some of the problems are listed on the following page.

A Note about Math Facts:

- Basic math skills are a necessary component for the success in 5th grade mathematics. Therefore, upon entering 5th grade, students need to be expertly skilled in their basic multiplication, addition, and subtraction facts. For example: $5 \times 6 = 30$; $9 \times 8 = 72$; $12 \times 11 = 121$.
- Students will be responsible for multiplication facts from $0 \times 0 - 12 \times 12$.
- This collection of problems will identify those concepts that you have mastered as well as those you will need to practice and review.

Please remember that this packet is only a suggested sample of problems. Students seeking more practice should utilize IXL, Khan Academy, and other online learning tools to strengthen skills in the suggested areas below.

***SOLVE THESE PROBLEMS WITHOUT THE USE OF A CALCULATOR**

REVIEW: Grade 4

Operations and Algebraic Thinking 4.OA

- Use the four operations with whole numbers to solve problems.
- Gain familiarity with factors and multiples.
- Generate and analyze patterns.

Number and Operations in Base Ten 4.NBT

- Generalize place value understanding for multi-digit whole numbers.
- Use place value understanding and properties of operations to perform multi-digit arithmetic.

Number and Operations – Fractions 4.NF

- Extend understanding of fraction equivalence and ordering.
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- Understand decimal notation for fractions, and compare decimal fractions.

Measurement and Data 4.MD

- Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- Represent and interpret data.
- Geometric measurement: understand concepts of angle and measure angles.

Geometry 4.G

- Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

PREVIEW: Grade 5

Operations and Algebraic Thinking 5.OA

- Write and interpret numerical expressions
- Analyze patterns and relationships

Number and Operations in Base Ten 5.NBT

- Understand the place value system.
- Perform operations with multi-digit whole numbers and with decimals to hundredths.

Number and Operations – Fractions 5.NF

- Use equivalent fractions as a strategy to add and subtract fractions.
- Apply and extend previous understandings of multiplication and division to multiply and divide fractions

Measurement and Data 5.MD

- Convert like measurement units within a given measurement system.
- Represent and interpret data.
- Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

Geometry 5.G

- Graph points on the coordinate plane to solve real-world and mathematical problems
- Classify two-dimensional figures into categories based on their properties.

I. Numbers & Operations in Base Ten (4.NBT)

1. Write the given number in expanded form: 12,695
2. Round the given number to the place value of the underlined digit: 123,875
3. If the following number were increased by six hundred, what would the new number be? 7,196

4. Compare the following numbers using $<$, $>$, $=$

$$2,328 \underline{\hspace{1cm}} 2,238$$

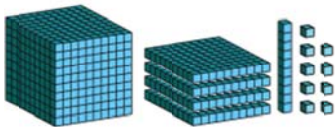
5. a. Find the sum:

$$45654 + 32879$$

- b. Find the difference:

$$45654 - 32879$$

6. What is the value of the given model: _____



7. a. Find the sum:

$$3078 + 2398$$

- b. Find the difference:

$$3078 - 2398$$

8. Write the number “six hundred three” in standard form: _____

9. Three friends got together to sell beverages.
Akash sold 13 cups of lemonade.
Harleen sold 18 cups of iced tea.
Shamika sold 24 cups of apple juice.
How many drinks did they sell together?
10. Write the following statement as a multiplication equation:
35 is 5 times as many as 7.

II. Operations & Algebraic Thinking (4.OA)

11. List all of the factors of 60.
12. A school district had four elementary schools to start the year. North Elementary School had 1,175 students; East Elementary School had 1,580 students; West Elementary School had 1,435 students; and South Elementary School had 1,810 students.
- However, they thought their elementary schools were too crowded, so they built another elementary school halfway through the year. They divided the students so that each of the 5 schools had the same amount of students. How many students did each school have after the new school was built?

13. Anthony is buying a black shirt and a blue jacket. The cost of the blue jacket is 3 times as much as the black shirt. If the black shirt costs \$12, how much does the blue jacket cost?

14. Find the product of 3,541 and 26.

15. Divide. Check your answer.

$$7 \overline{) 173}$$

16. Which list contains all prime numbers?

a. 19, 28, 29

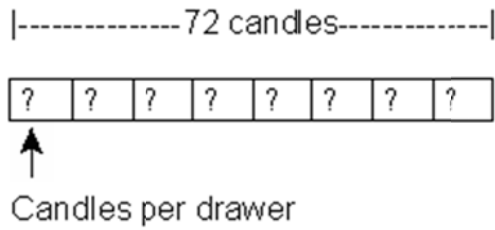
b. 11, 19, 30

c. 11, 19, 29

d. 11, 15, 29

17. What is the product of 34 X 447?

18. There are 72 candles in 8 drawers. Each drawer has the same number of candles. Which number sentence shows how many candles are in each drawer?



19. What is the best estimate of the product of 9×78 ?
- a. About 600
 - b. About 630
 - c. About 720
 - d. About 800

20. Which number completes the table?

n	153	126	99	57
$n \div 9$	17	?	11	3

21. There were 26 computers in the computer lab. If c represents the number of computers that were removed from the lab, which expression represents the number of computers that remain in the computer lab?

- a. $26 - c$ b. $26 + c$ c. $26 \times c$ d. $26 \div c$

22. Danny had \$216. After paying for a new CD player, he had $\$216 - x$, where x equals the amount he paid for the CD player. If x is \$38, how much money did Danny have after he paid for the CD player?

23. A newborn manatee weighs 65 pounds. The mother manatee weighs 17 times as much. How much does the mother manatee weigh?

24. $2,608 \div 4 =$

25. A DVD cabinet has 7 shelves. Each shelf can hold about 38 DVDs. What is a reasonable estimate of the number of DVDs the cabinet can hold?

A. 210 because 7×38 is about $7 \times 30 = 210$

B. 280 because 7×38 is about $7 \times 40 = 280$

C. 320 because 7×38 is about $8 \times 40 = 320$

D. 350 because 7×38 is about $7 \times 50 = 350$

26. Complete the table.
Then express the pattern in a number sentence.

INPUT	OUTPUT
1	3
2	6
3	
	12
5	

III. Numbers & Operations: Fractions (4.NF)

27. Find the common denominator of these numbers: $\frac{2}{3}$ and $\frac{4}{5}$
28. Solve: $5\frac{2}{3} + 6\frac{4}{5} =$
29. Solve: $3\frac{2}{3} - 1\frac{4}{5} =$
30. Solve: $5 \times \frac{4}{5} =$
31. In a relay race, each runner runs $\frac{1}{2}$ of a lap. If there are 4 team members running, then how long is the race? Show your reasoning with words and/or a model.

32. You are following the recipe for Chocolate---Oatmeal Drop Cookies.

- 2 $\frac{3}{4}$ cups flour
- 2 $\frac{1}{2}$ teaspoons baking powder
- $\frac{1}{2}$ teaspoon salt
- $\frac{1}{2}$ cup margarine
- 1 $\frac{3}{4}$ cups sugar
- 1 $\frac{1}{2}$ teaspoons vanilla
- 2 eggs
- 1 $\frac{1}{4}$ cups milk
- 2 cups quick oatmeal
- 1 ounce cocoa

In the kitchen you have the following amount of each ingredient:

- Flour: 8 cups
- Baking Powder: 20 teaspoons
- Salt: 12 teaspoons
- Margarine: 5 cups
- Sugar: 8 cups
- Vanilla: 10 teaspoons
- Eggs: 1 dozen
- Milk: 4 cups
- Oatmeal: 8 cups
- Cocoa: 8 ounces

Determine how much of each ingredient you would have left over after you complete the recipe for the cookies.

- Flour: _____
- Baking Powder: _____
- Salt: _____
- Margarine: _____
- Sugar: _____
- Vanilla: _____
- Eggs: _____
- Milk: _____
- Oatmeal: _____
- Cocoa: _____

33. Write the following decimals as fractions: a.

0.3

b. 1.5

c. 0.62

d. 4.55

34. Ron says 0.18 is greater than 0.5. Nick says Ron is wrong. Who is right? Justify your answer with written explanation.

IV. Measurement & Data (4.MD)

35. How many inches are in 6 feet?

36. How many millimeters are in 3 centimeters?

37. A rectangular garden has an area of 80 square feet. It is 5 feet wide.

a. How long is the garden?

b. What is the perimeter of the garden?

38. Gina decides to figure out how long her class spends actually studying and learning in one day. She arrives at school at 8:30 a.m. The class goes to recess from 9:30 a.m. to 9:45 a.m., and then works in literature circles and writing until 11:30 a.m., when the class goes to lunch. Students are at lunch for 40 minutes. After they return to class, they work on math until their ten-minute afternoon break at 1:30 p.m. After break, they work on science and social studies until school dismisses at 3:10 p.m. How much time are the students in school? How much time are they learning and studying? Give your answer in hours and minutes.

- 39.** Mr. North spent \$144.00 to build a fence around the perimeter of his vegetable garden. He paid \$6.00 per yard for fencing.
- Draw two possible plans for Mr. North's vegetable garden. Include the measurements for area and perimeter.
 - Explain the steps you took to solve this problem.
 - Which plan do you think is the best design? Why?

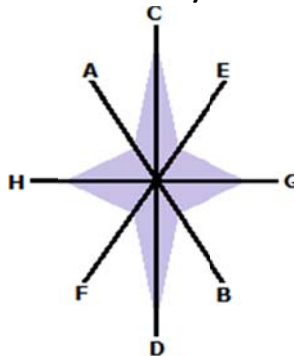
- 40.** Chris and Kevin have an insect collection. They have measured the lengths of all their insects. Their data show that 4 insects are $\frac{1}{8}$ inch long, 6 are $\frac{1}{4}$ inch long, 8 are $\frac{1}{2}$ inch long, 2 are $\frac{1}{6}$ inch long, 1 is $\frac{1}{12}$ inch long, and 5 are $\frac{1}{3}$ inch long.
- a.** Create a line plot that shows the data.

- b.** How much longer is the longest insect from the shortest insect?

V. Geometry (4.G)

- 41.** A right angle is an angle that measures how many degrees?

- 42.** Which of the lines is a line of symmetry for the star below?



- a.** CD only **b.** AB and EF **c.** CD and GH **d.** AB only
- 43.** What is the name of a polygon with 5 vertices?

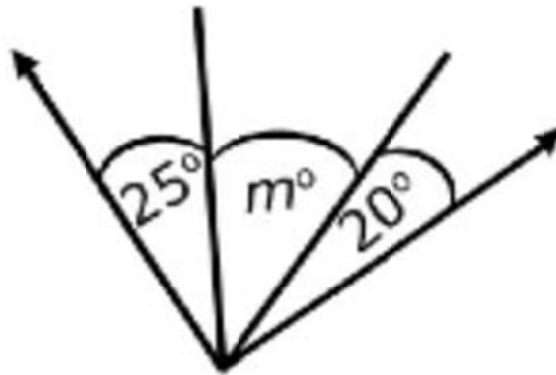
44. Draw an angle that is

I. Obtuse

II. Right

III. Acute

45. Ella and Molly's teacher told them that the two outside rays in this drawing are perpendicular. She asked them to find the missing angle measure. What is it?



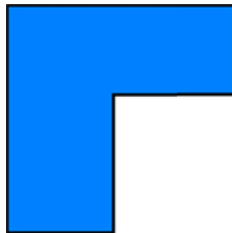
46. How many pairs of perpendicular line segments make up the figure below?

A. 6

B. 3

C. 5

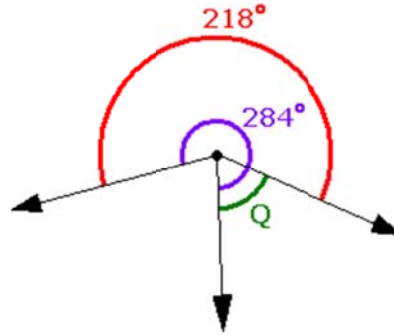
D. 12



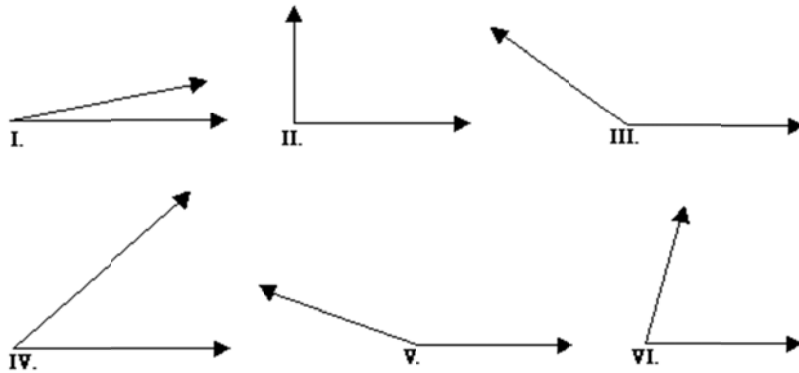
47. Which of the following is a 4-sided shape whose opposite sides are parallel?

- A. cube B. triangle C. parallelogram D. circle

48. What is the measure of $\angle Q$ below?



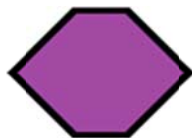
49. Which angle below appears to be a right angle?



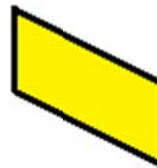
50. Which figure has **exactly** two lines of symmetry?



P.



Q.



R.



S.