

# BBCS

## SUMMER MATH PACKET

### *FOR STUDENTS ENTERING* *Math 7*

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. Remember, NO CALCULATORS MAY BE USED. SHOW ALL WORK. USE PENCIL. ANSWERS SHOULD BE IN LOWEST TERMS.

**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.**

This is a 12-day review that will help you to remember some of the math concepts covered during the 6<sup>th</sup> grade year. It is to be completed over the summer and given to your 7<sup>th</sup> grade math teacher on the first day of school.

Put this in a place that you will not lose it. Then, in August, spend a little time each day answering the questions. Everyone must complete the review, so do not throw it away and assume that you will not be responsible for it.

**Helpful tips:**

- When adding or subtracting whole numbers or decimals, line up the place values.
- When adding or subtracting fractions, get a common denominator.
- When multiplying or dividing mixed numbers, put them into improper fractions first.
- When dividing fractions, do not forget to change the sign to multiplication and make the second fraction its reciprocal.
- Factors are numbers that can be evenly divided into a number...the factors of 6 are 1, 2, 3 and 6.
- Multiples are the product of a number and any other number...some multiples of 5 are 0, 5, 10, etc.
- To change a fraction into a decimal, divide the numerator by the denominator.
- To change a decimal to a fraction, put the number over the place value of the last digit and reduce.
- To change a fraction or decimal into a percent, multiply by 100.
- To change a percent into a fraction or decimal, divide by 100.
- NO CALCULATORS ARE TO BE USED!!!!

Good luck and see you next year!

**Day 1**

1) Round 45.972 to the nearest tenth.

\_\_\_\_\_

2)  $>$ ,  $<$ , or  $=$ . 0.510 \_\_\_ five hundred ten- thousandths

\_\_\_\_\_

3)  $17^1 \times 10^3 =$  \_\_\_\_\_

\_\_\_\_\_

4)  $14.2 \times 0.001 =$  \_\_\_\_\_

\_\_\_\_\_

5)  $36,000 \div \square = 400$

\_\_\_\_\_

6)  $4.5 \div 0.009$

\_\_\_\_\_

7)  $607 \div 10^5$

\_\_\_\_\_

8) What is  $33\frac{1}{3}\%$  of 165?

\_\_\_\_\_

9) What is 25% of 80?

\_\_\_\_\_

10) An ultra marathon athlete can run long distances at an average speed of  $6\frac{3}{4}$  miles per hour. At this rate, how long will it take him to run 50 miles?

\_\_\_\_\_

Complete the table.

Fraction	Decimal	Percent
11)	12)	2%
13)	.08	14)
$\frac{1}{3}$	15)	16)

Simplify.

17)  $965(789)$

18)  $27,269 \div 67$

19)  $4\frac{1}{8} \div 2\frac{1}{6}$

20)  $156,702 \div 78$

**Day 2**

1)  $2^3 \times 3^2 \times 5$  is the prime factorization of what number?

\_\_\_\_\_

2) List all of the factors of 72.

\_\_\_\_\_

3)  $33.62 \times 10^5 = ?$

\_\_\_\_\_

4)  $64 \div .8 = ?$

\_\_\_\_\_

5) Compare using  $>$ ,  $<$ , or  $=$ .  $1^{12}$  \_\_\_\_\_  $12^0$

\_\_\_\_\_

6) 2 is what percent of 40?

\_\_\_\_\_

7) What is 12.5% of 80?

\_\_\_\_\_

**Simplify.**

8)  $21.4 + 2 \times 2.3$

9)  $8\frac{1}{2} + 7\frac{2}{5} + 1\frac{7}{12}$

10)  $12 - 2(23 - 4^2) \times 4 - 2$

**Day 3**

1) Write  $12\frac{9}{5}$  in simplest form.

\_\_\_\_\_

2) Reduce  $\frac{51}{102}$  to lowest terms.

\_\_\_\_\_

3) List the first 5 multiples of 12.

\_\_\_\_\_

4)  $3.5 \times 10^3 = ?$

\_\_\_\_\_

5) Compare using  $>$ ,  $<$ , or  $=$ .  $2^4$  \_\_\_\_\_  $4$  squared

\_\_\_\_\_

6) What is 25% of 52?

\_\_\_\_\_

7) 12 is 20% of what number?

\_\_\_\_\_

**Simplify.**

8)  $221.4 \div .041$

9)  $2\frac{1}{4} \div 22\frac{1}{2}$

10)  $12\frac{3}{4} \div 4\frac{7}{8}$

**Day 4**

1)  $26 - 36 =$  \_\_\_\_\_

\_\_\_\_\_

2)  $-21 + 42 =$  \_\_\_\_\_

\_\_\_\_\_

3)  $-9 + -12 =$  \_\_\_\_\_

\_\_\_\_\_

4) 36 is 75% of what number?

\_\_\_\_\_

5) 6 is what percent of 1200?

\_\_\_\_\_

6)  $.024 \div .6 = ?$

\_\_\_\_\_

7)  $1.2 \times .02 = ?$

\_\_\_\_\_

8) You earned 17 out of 20 on a quiz. What percent did you earn?

\_\_\_\_\_

9) The ratio of the number of bees to the number of butterflies in a picture is 7 : 3. Express the number of bees as a fraction of the total number of bees and butterflies?

\_\_\_\_\_

10) The ratio of Slade's test points to Corbett's test points is 3 : 2. If Corbett's score is 28 points lower than Slade's, what's their total score?

\_\_\_\_\_

Complete the table.

Fraction	Decimal	Percent
11)	12)	350%
13)	.216	14)
$\frac{3}{5}$	15)	16)

Simplify

17)  $23.4 \div .065$

18)  $5\frac{2}{3} \times 6$

19)  $12\frac{3}{8} \times 1\frac{5}{11} \times 1\frac{3}{5}$

20)  $4 + \frac{2}{3} \times \frac{1}{6} \div \frac{1}{2} - 1$

1) Round 45.972 to the nearest whole number.

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2) Find the value of 6 squared.

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3)  $.52 \div 10,000 =$  \_\_\_\_\_

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4)  $.08 \times .007 =$  \_\_\_\_\_

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5)  $36 : 24 = 3 :$  \_\_\_\_\_

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6) What is 62.5% of 320?

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7) 20 is 40% of what number?

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8) At a school that has 200 employees, 40% of the people that work there walk to work. How many people is that?

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**Simplify.**

9)  $326.8 \div .76$

10)  $45\frac{3}{8} - 21\frac{5}{12}$

Solve the problem below. Write a justification explaining your answer and solution on the next page. Use complete sentences.

# Cooking Turkey

A recipe for cooking a turkey states to allow 20 minutes for each pound of turkey and to add 5 minutes per pound if the turkey is stuffed. Our turkey weighs 16 pounds and will be stuffed. To have dinner at two o'clock in the afternoon, what time does the turkey need to go in the oven? Allow  $\frac{1}{2}$  hour for cooling and carving.



**Day 7**

1) Round 45.972 to the nearest tenth.

\_\_\_\_\_

2) Find the value of  $10^{10}$ .

\_\_\_\_\_

3) Reduce  $\frac{105}{135}$  to lowest terms.

\_\_\_\_\_

4)  $42,300 \div 100 = ?$

\_\_\_\_\_

5) Compare using  $>$ ,  $<$ , or  $=$ .  $3 + -3$  \_\_\_\_\_  $3^0$

\_\_\_\_\_

6) What's the area of a square with a side of 6 inches?

\_\_\_\_\_

**Simplify.**

7)  $390.91 \div 9.7$

8)  $26\frac{1}{6} - 18\frac{5}{12}$

9)  $3\frac{1}{5} \times 1\frac{3}{10}$

10)  $2[27 - (8 + 2^2)] \div 5$

**Day 8**

1) Find the value of  $2^2 \times 3^2$  .

\_\_\_\_\_

2)  $2.56 \times .001 =$  \_\_\_\_

\_\_\_\_\_

3) Compare using  $>$ ,  $<$ , or  $=$ .  $3.24 \times 21.2$  \_\_\_\_\_  $.324 \times 212$

\_\_\_\_\_

4) What is 30% of 180?

\_\_\_\_\_

5) Rachel has a collection of 40 stuffed animals.  $\frac{3}{8}$  of the animals are bears and are dogs. How many bears and dogs does she have?

\_\_\_\_\_

6) If I spend \$120 and save \$90 of my allowance each week, then what is the ratio of my allowance to my savings?

\_\_\_\_\_

7) The ratio of the number of adults to the number of children on a cruise was 13 : 6. The ratio of girls to the total number of children was 2 : 5. If there were 198 boys on the cruise, what was the total number of passengers?

\_\_\_\_\_

**Simplify.**

8)  $27.6 \times .45$

9)  $8 - \frac{4}{7}$

10)  $13\frac{17}{20} - 8$

**Day 9**

1) Find the value of 3 cubed.

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2)  $7.63 \div 100 = \underline{\hspace{2cm}}$

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3) Compare using  $>$ ,  $<$ , or  $=$ .     $3 \underline{\hspace{1cm}}$  the opposite of  $-3$

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4) 55% of 100 is what number?

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5) You left a 20% tip on a \$25 bill at Reginelli's? How much did you pay in all?

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6) Find the LCM of 24 and 36.

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7) Some workers are digging a drain. The ratio of the length that has already been dug to that which has not been dug is 3 : 4. After another 20 meters has been dug, the ratio becomes 4 : 3. What is the total length of the drain to be dug?

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8) Mrs. Ray sold 96 pounds of shrimp.  $\frac{3}{4}$  of it was sold at \$5.60 per pound and the rest at \$4.70 per pound. How much money did she receive altogether?

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Complete the table.

Fraction	Decimal	Percent
9)	10)	$12\frac{1}{2}\%$
11)	$\overline{.6}$	12)
$\frac{1}{6}$	13)	14)

Simplify.

15)  $5.32 + .891 + 7$

16)  $17\frac{9}{10} - 6\frac{5}{6}$

17)  $3\frac{1}{3} \div 20$

18)  $\frac{1}{3} + \frac{1}{2} \times \frac{4}{5}$

19)  $\frac{1}{2} + 3 \times \frac{3}{2} \div 2 - \frac{3}{8}$

20)  $6 \div \left( \frac{3}{5} - \frac{3}{10} \right) \times \frac{1}{5}$

1) List the first 5 multiples of 21.

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2)  $6.89 \div 10^3 = ?$

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3)  $8400 \div 40 = ?$

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4) Compare using  $>$ ,  $<$ , or  $=$ .  $-14$        $0$

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5) 25 is what percent of 20?

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6) 33 is what percent of 60?

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7) If 123 of the 300 students earned an A, what percent the students earned an A?

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**Simplify.**

8)  $8 - .03$

9)  $3\frac{3}{10} + 7\frac{4}{5} + 2\frac{1}{6}$

10)  $\frac{8}{21} \times \frac{5}{6}$

1) Round 495.972 to the nearest thousand.

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2) List all of the factors of 49.

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3)  $.0072 \div .3 = ?$

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4) Compare using  $>$ ,  $<$ , or  $=$ .  $-12$  \_\_\_\_\_  $-10$

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5)  $12 - 32 = ?$

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6) 30 is  $66\frac{2}{3}\%$  of what number?

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7) Sue saw a painting that was listed at \$210. However, the painting was on sale for 15% off. What was the amount of discount (how much she got off), and how much money did sue actually pay for the painting?

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**Simplify.**

8)  $2^3 \times [81 \div (19 - 10)] - 15$

9)  $56.4 - 9.67$

10)  $14\frac{5}{6} + 35\frac{9}{14}$

Solve the problem below. Write a justification explaining your answer and solution on the next page. Use complete sentences.

# No Green Paint

A cube with 4-centimeter edges is painted green and then cut into cubes with 1-centimeter edges. How many of the small cubes have no green sides?

