

Name _____

Date _____

Summer Math
Completed 6th grade-Entering 7th grade

Instructions: Please complete the following problems showing all work. If you use scratch paper to work the problems out, please number the problems on the paper so that the work can be easily associated with a problem. This packet is due on the first day of school and will count as your first daily grade of the semester. This will be a completion grade. Full credit will not be given if work is not shown where applicable. Once your Summer Work is graded for completion, you will have the opportunity to review the packet with your teacher. Your first quiz of the semester will cover the topics in this packet.

If you are unclear as to solving a problem, then you are welcome to check www.coolmath.com as a resource or www.Khanacademy.org for short videos which will explain the process. There are many other web resources, but those are two that have proven to be excellent. You should work through the problems until the correct solution is found, being sure to show all of the correct work along with this solution.

Section 1**Order of
Operations**

Problems:

Answers:

1.	Evaluate the expression. $9 - 3 + 3 - 6$	1.
2.	Evaluate the expression. $60 \div 4 \div 3$	2.
3.	Evaluate the expression. $12 + 6 \times 10$	3.
4.	Evaluate the expression. $84 \div 7 + 4$	4.
5.	You buy a used guitar for \$45. You then pay \$20 for each of 5 guitar lessons. The total cost can be found by evaluating the expression $45 + 20 \times 5$. Is the total cost \$145 or \$325?	5.

Section 2**Decimals**

Problems:

Answers:

1.	Find the sum. $6.954 + 12.04$	1.
2.	Find the sum. $3.847 + 13.58$	2.
3.	Find the sum. $2 + 12.99$	3.
4.	Find the sum. $8.2 + 13.28$	4.
5.	Find the difference. $7.89 - 2.73$	5.
6.	Find the difference. $8 - 4.6$	6.
7.	Find the difference. $102.08 - 23.6$	7.
8.	Find the difference. $4.76 - 2.19$	8.
9.	Find the product. 4.70×0.85	9.
10.	Find the product. 3.8×0.82	10.
11.	Find the product 5.131×0.05	11.
12.	Find the product 5.26×88	12.
13.	Find the quotient. $11.2 \div 1.6$	13.
14.	Find the quotient. $0.036 \div 0.18$	14.
15.	Find the quotient. $0.24 \div 1.2$	15.
16.	Find the quotient. $12.8 \div 0.16$	16.
17.	Evaluate $2.6 + r - t$ when $r = 5.94$ and $t = 1.2$.	17.
18.	For your birthday you receive a \$25 gift certificate. You want to buy 3 used video games whose prices are \$6.79, \$5.21, and \$6.97. Can you buy all 3 games using the gift certificate?	18.
19.	You buy a pack of 3 trading cards for \$2.82. Find the price of each card.	19.

Section 3

Factors and Multiples

Problems:

Answers:

1.	Write the prime factorization of 54 using exponents if necessary.	1.
2.	Write the prime factorization of 1300 using exponents if necessary.	2.
3.	Tell whether 70 is prime or composite.	3.
4.	Write all the factors of the number 30.	4.
5.	Write all the factors of the number 50.	5.
6.	Find the greatest common factor of 24 and 44 by listing factors.	6.
7.	Find the greatest common factor of 42 and 30 by listing factors.	7.
8.	Find the greatest common factor of 50, 30, and 10 by listing factors.	8.
9.	Find the least common multiple of the numbers 7 and 21 by listing.	9.
10.	Find the least common multiple of the numbers 6 and 4 by listing.	10.
11.	Find the least common multiple of 6 and 9 by listing.	11.
12.	A class of 18 students is on a field trip at the zoo. The teacher wants to break the class into groups of the same size. Find all the possible group sizes by writing all the factors of 18.	12.
13.	You visit a model train shop that has two working model trains. The trains share a station, but they run on separate tracks. One of the trains returns to the station every 2 minutes. The other returns every 7 minutes. Both trains just left the station. After how many minutes will the trains both return to the station?	13.

Section 4

Fractions

Problems:

Answers:

1.	Write $5\frac{11}{13}$ as an improper fraction.	1.
2.	Write $2\frac{5}{7}$ as an improper fraction.	2.
3.	Write $4\frac{9}{11}$ as an improper fraction.	3.
4.	Write $\frac{31}{9}$ as a mixed number.	4.
5.	Write $\frac{17}{5}$ as a mixed number.	5.
6.	Write $\frac{32}{7}$ as a mixed number.	6.
7.	Write the decimal 0.4 as a fraction in simplest form.	7.
8.	Write the decimal 0.76 as a fraction in simplest form.	8.
9.	Write the decimal 0.52 as a percent.	9.
10.	Write decimal 0.38 as a percent.	10.
11.	Write the fraction $\frac{1}{4}$ as a decimal.	11.
12.	Write the fraction $\frac{3}{5}$ as a decimal.	12.
13.	Write 92% as a decimal.	13.
14.	Write 47% as a decimal.	14.
15.	Write the fraction $\frac{1}{2}$ as a percent.	15.
16.	Write 63% as a fraction in lowest terms.	16.
17.	At one time, 34 out of 100 regions in a country had lighthouses. This can be written as the fraction $\frac{34}{100}$. How do you write this fraction as a decimal?	17.
18.	Each fraction represents the part of the total number of raffle tickets sold by each state in a multi-state raffle. Order the states (according to the fractions) from the greatest to the least. Alaska = $\frac{1}{5}$ California = $\frac{1}{26}$ Montana = $\frac{1}{16}$ Texas = $\frac{1}{15}$	18.
19.	Find the sum and simplify if possible. $\frac{3}{14} + \frac{2}{14}$	19.

20.	Find the sum and simplify if possible. $\frac{4}{11} + \frac{3}{11}$	20.
21.	Find the sum and simplify if possible. $\frac{5}{6} + \frac{4}{5}$	21.
22.	Find the sum and simplify if possible. $\frac{7}{8} + \frac{6}{7}$	22.
23.	Find the sum and simplify if possible. $4\frac{5}{6} + 3\frac{3}{4}$	23.
24.	Find the sum and simplify if possible. $7\frac{3}{4} + 9\frac{2}{9}$	24.
25.	Find the difference and simplify if possible. $\frac{3}{4} - \frac{1}{4}$	25.
26.	Find the difference and simplify if possible. $\frac{5}{8} - \frac{3}{8}$	26.
27.	Find the difference and simplify if possible. $\frac{2}{3} - \frac{1}{5}$	27.
28.	Find the difference and simplify if possible. $\frac{3}{7} - \frac{1}{3}$	28.
29.	Find the difference and simplify if possible. $9\frac{2}{9} - 5\frac{5}{9}$	29.
30.	Find the difference and simplify if possible. $8\frac{1}{3} - 1\frac{2}{6}$	30.
31.	Before a rough piece of wood can be used in building a house, it needs to be squared off and sanded. During this process, the thickness of a rough piece of wood $\frac{7}{8}$ inch thick is always reduced to $\frac{13}{16}$. How much thinner is the wood now?	31.
32.	Find the product and simplify if possible. $\frac{1}{6} \times \frac{1}{11}$	32.

33.	Find the product and simplify if possible. $9 \times \frac{5}{8}$	33.
34.	Find the product and simplify if possible. $\frac{8}{11} \times \frac{1}{7}$	34.
35.	Find the product and simplify if possible. $\frac{4}{7} \times \frac{1}{4}$	35.
36.	Find the product and simplify if possible. $2\frac{1}{3} \times 8\frac{1}{4}$	36.
37.	Find the quotient and simplify if possible. $\frac{7}{8} \div \frac{2}{3}$	37.
38.	Find the quotient and simplify if possible. $\frac{5}{6} \div \frac{4}{7}$	38.
39.	Find the quotient and simplify if possible. $\frac{6}{7} \div 12$	39.
40.	Find the quotient and simplify if possible. $1\frac{3}{7} \div 2\frac{1}{2}$	40.
41.	The winner for class president got $\frac{4}{7}$ of the vote. If 672 students voted, how many students voted for the winner?	41.

Section 5**Integers**

Problems:

Answers:

1.	Find the sum. $-14 + (-7)$	1.
2.	Find the sum. $-2 + (-11)$	2.
3.	Find the sum. $10 + (-3)$	3.
4.	Find the sum. $-13 + 7$	4.
5.	Find the difference. $3 - 6$	5.
6.	Find the difference. $-7 - 9$	6.
7.	Find the difference. $-2 - (-6)$	7.
8.	Find the difference. $7 - (-11)$	8.
9.	Find the product. $-10(7)$	9.
10.	Find the product. $-6(-6)$	10.
11.	Find the product. $2(0)$	11.
12.	Find the product. $3(-9)$	12.
13.	Find the quotient. $12 \div (-4)$	13.
14.	Find the quotient. $\frac{-63}{-9}$	14.
15.	Find the quotient. $(-20) \div (-4)$	15.
16.	Find the quotient. $\frac{84}{-12}$	16.
17.	Atoms, the building blocks of all matter, are made up of protons that each have a charge of 1, neutrons that each have a charge of 0, and electrons that each have a charge of -1 . Suppose an atom has 17 protons and 14 electrons. What is its total charge?	17.
18.	Suppose the highest point on a continent is 5,708 meters above sea level and the lowest point is about 402 meters below sea level. What is the difference, in meters, between these elevations?	18.

Section 6**Solving Equations**

Problems:

Answers:

1.	Solve. Show your steps used to solve. $x + 8 = -66$	1.
2.	Solve. Show your steps used to solve. $x + 6 = -85$	2.
3.	Solve. Show your steps used to solve. $-1 = y - 15$	3.
4.	Solve. Show your steps used to solve. $y - 84 = 5$	4.
5.	Solve. Show your steps used to solve. $-33x = 429$	5.
6.	Solve. Show your step sued to solve. $4x = -52$	6.
7.	Solve. Show your steps used to solve. $\frac{x}{8} = 0.82$	7.
8.	Solve. Show your steps used to solve. $\frac{x}{-3} = -0.2$	8.