Rising 6th Grade – Summer Math Packet

Multiplication and Division (no calculator)

(Sixth graders should know all fact families 0-12 with speed and accuracy).

Write the answers to the following math facts:

1.) 7 x 9 = ____ 4.) 4 x 6 = ____ 7.) 6 x 9 = ____ 10.) 5 x 12 = ____

2.) 6 x 6 = ____ 5.) 6 x 7 = ____ 8.) 7 x 8 = ____ 11.) 7 x 12 = ____

3.) 8 x 4 = ____ 6.) 8 x 6 = ____ 9.) 9 x 4 = ____ 12.) 9 x 12 = ____

Solve the following problems. Show all of your work. Draw a box around your final answer.

13.)
$$\begin{array}{r} 74 \\ \times\ 13 \end{array}$$

14.)
$$\begin{array}{r} 423 \\ \times\ 30 \end{array}$$

15.)
$$\begin{array}{r} 69 \\ \times\ 58 \end{array}$$

16.)
$$\begin{array}{r} 307 \\ \times\ 46 \end{array}$$

17.) $675 \div 9$

18.) $1440 \div 24$

Factors and Multiples (no calculator)

Use the clues to determine the secret numbers:

19. _____
Clue 1: The number has 2 digits.
Clue 2: The number has 13 as a factor.
Clue 3: The sum of the digits is 11.

20. _____
Clue 1: The number is prime.
Clue 2: The number is less than 19.
Clue 3: The sum of the digits is greater than 7.

21. _____
Clue 1: The number has three digits.
Clue 2: The number is less than 140.
Clue 3: The number has 7 as a factor.
Clue 4: The number is even.
Clue 5. The sum of the digits is less than 9.

22. _____
Ms. Goldman is thinking of a number that is less than 20 and has three factor pairs. She says that if she adds the factors in each factor pair the sums are 19, 11 and 9. What is her number?

Rising 6th Grade – Summer Math Packet

23. List all the factors of

12_____

7_____

36_____

80_____

225_____

24. Find the common factors of 12 and 20 .Circle the Greatest Common Factor (GCF)_____

25. Find the common factors of 24 and 48. Circle the GCF_____

26. Find the common factors of 30 and 72. Circle the GCF_____

27. Graham is planning a party for his younger sister. He has 36 prizes and 24 balloons. How many children can he have at the party so that each child gets an equal number of prizes and an equal number of balloons? Explain your answer using complete sentences._____

_____

28. A number has 4 and 5 as factors. What other numbers must be factors? Why? What is the smallest number this number could be?_____

29. List 10 multiples of 12._____

30. List 10 multiples of 13_____

31. List 20 multiples each of 5 and 8. List all the multiples they have in common. What is the Least Common Multiple (LCM) of 5 & 8? _____

32. Can you find the Greatest Common Multiple? Why or why not?_____

33. Is the number 26 divisible by 2? 3? 5? Or 9? How do you know?_____

_____

34. Is the number 432 divisible by 2? 3? 5? 6? 9? 10?_____

35. Two radio stations are playing “Old Bald Men.” WXRT plays the song every 18 minutes and WNPR plays it every 24 minutes. Both stations play the song at 3:00 PM. When is the next time the stations will play the song at the same time?_____

36. Mike and Duane are performing live at a Parker MX. This year they want to incorporate a crazy light show. They spoke with Mr. Early and decided that red lights would flash every 5 seconds, blue lights would flash every 8 seconds, and yellow lights would flash every 10 seconds. How many seconds or minutes into the show will all three lights flash at the same time?_____

Rising 6th Grade – Summer Math Packet

37. You just joined a soccer team and it's time to choose your number. You decide you want a prime number, but it must be between 20 and 40. What do you choose and how can you prove it's a prime number?_____

38. Make up a word problem about multiples or factors and show it to someone in your family.____

_____

_____

_____

_____

Measurement (Customary Length) *review*

12 inches = 1 foot
3 feet = 1 yard
5,280 feet = 1 mile
1,760 yards = 1 mile

Use the chart above to help you solve the following problems. Show all your work.

39.) 6 yards = _____ feet

40.) 6 feet = _____ inches

41.) 2 miles = _____ feet

42.) 2 miles = _____ inches

43.) 39 yards = _____ inches

44.) When you are converting (changing) a larger unit of measurement to a smaller unit of measurement, do you multiply or divide? Draw a picture that proves your answer.

45.) 36 inches = _____ feet

46.) 36 inches = _____ yard(s)

47.) 63 feet = _____ yards

48.) 108 inches = _____ feet

49.) 45 feet = _____ yards

50.) When you are converting (changing) a smaller unit of measurement to a larger unit of measurement, do you multiply or divide? Draw a picture that proves your answer.

Rising 6th Grade – Summer Math Packet

Fractions (no calculator)

51.) The denominator is 5 and the numerator is 4. Write the fraction._____

52.) Find 5 fractions that are equal to 1/5._____

53.) Which is bigger, 2/3 or 3/5.? How can you prove your answer? Show at least two ways.

54.) 3/8 + 2/8 _____

55.) 5/8 + 7/8 _____

56.) 3/8 +1/4_____

57.) Write a fraction that is greater than 1/2 and less than 3/4 ? How do you know it is correct?

_____

Find the missing numerator or denominator. Show <u>all</u> your work.

58.) 3/7 = 9/? Denominator =

59.) 4/24 = 1/? Denominator =

60.) 6/48 = ?/8 Numerator =

61.) 28/35 = ?/5 Numerator =

62.) 48/72 = 6/? Denominator =

63.) Fiona bought a brand new Harley Davidson motorcycle. Since the weather was nice, she decided to go out for a ride with some of her friends. Before leaving town, she stopped to fill up her motorcycle with gas so that she had a full tank. If Fiona's motorcycle has a 4 gallon gas tank, and she only had to add 2 4/7 gallons, how much gas was in the tank before she filled up? Show all your work_____

_____

64.) Change 13/8 to a mixed number._____

65.) Change 24/5 to a mixed number._____

Write the following words as a fraction:

66.) three and nine fifteenths _____

67.) twelve and fourteen twentieths_____

Change the following into an improper fraction:

68.) six and two thirds _____

69.) ten and six sevenths _____

Rising 6th Grade – Summer Math Packet

Simplify the following:

70.) 14/2 _____

71.) 1 8/32 _____

72.) 8/24 _____

73.) 32/64 _____

74.) 5/15 _____

75.) 20/45 _____

Decimals and Percents (no calculator)

76.) Write a fraction to represent each decimal. Make sure the fraction is in simplest form.

0.3 =

0.21 =

0.4 =

0.37 =

0.5 =

77.) Match up the fractions with the decimals they are equal to.

0.5	9/12
0.75	1/5
0.2	3/10
0.10	1/10
0.3	½

What place value do the underlined digits carry, and how many of each are there?

78) 10,<u>3</u>67

79) 5,23<u>4</u>.23

80) 10.2<u>0</u>01

81) <u>9</u>.16

82) 0.57<u>9</u>

83) <u>2</u>10.552

Round the following numbers to the nearest tenth.

Reminder: Since you are rounding to the nearest tenth, you need to refer to the digit in the hundredth's place value. If the digit in the hundredth's place value is 5 or greater, the digit in the tenth's place value will round up. If the digit in the hundredth's place value is less than 5, the digit in the tenth's place value will remain the same.
(Example: 10.067 = 10.1)

84.) 15.245 =

85.) 7.321 =

86.) 1.58 =

87.) 235.262 =

Rising 6th Grade – Summer Math Packet

Round the following numbers to the nearest whole number.

Reminder: Your answer must be just the whole number. No answer with a decimal will be correct.
(Example: 50.861 = 51)

88.) 213.56 =

89.) 10.39567 =

90.) 95.459 =

91.) 12.107 =

92.) Arrange the numbers below on the place value lines so they create the greatest value possible.
6, 8, 1, 3, 2

_____ _____. _____ _____

93.) Arrange the numbers below on the place value lines so they create the smallest value possible.
6, 8, 1, 3, 2

_____ _____. _____ _____

94.) Katherine was on an airplane to Spain. The trip would take exactly 12 hours. So far she had flown 3 hours. What percentage of the trip has Katherine completed so far?

95.) Marc had to walk to the grocery store which was exactly 50 meters from his house.
So far he has walked exactly 21 meters. What percentage of a mile has he walked?

96.) Leigh bought new shoes that will last for 500 miles. She has walked 20% of the recommended usage. How many miles has she walked so far?

Geometry

Rising 6th Grade – Summer Math Packet

Use the numbers below to solve 1, 2, & 3.

50º	75º	179º	130º	62º	90º
36º	150º	25º	160º	10º	142º

97.) Draw a circle around each acute angle.
98.) Draw a rectangle around each obtuse angle
99.)Leave each right angle as it is.

Show all your work, including pictures if they help, as you find the answers to the questions!
Ms. Hamilton wants to put a decorative iron fence (rather like Winnie's in *Tuck Everlasting*) around her yard. The yard is a perfect rectangle: its length is 24.75 feet and its width is 12.75 feet. Home Depot charges $50 a yard for iron fencing.
100.) How many feet of fencing does Ms. Hamilton need to buy?_____

101.) What do you call the distance around a rectangle? _____

102.) How much will the fencing cost?_____

Directions: Using your knowledge of lines, line segments, rays, and intersecting lines, answer the following questions. Use your ruler for straight lines.

103.) Draw line segment AB and have it intersect with line TR at point S.

104.) Draw two intersecting lines, label them, and have them intersect at point C.

105.) Create one drawing that shows three rays sharing one endpoint.

106.) Name 5 kinds of quadrilaterals

Rising 6th Grade – Summer Math Packet

For the following remember P=Perimeter l=length w=width A=Area. P= (l + w) x 2 and A= l x w

107.) Draw a rectangle with a length of 15 cm and a width of 6 cm. Find the Perimeter and Area.

Draw three examples of a rectangle that have an area of 30. Calculate the perimeter of each.
108.)

109.)

110.)