Summer Math Packet – Incoming Sixth Grader

1. Consider the number 49,752,003,096.

   (a) Write the number in words. [1]

   (b) What is the place value of the digit 4 in this number? _____ [1]

   (c) What digit is in the ten millions place? _____ [1]

   (d) Round this number to the nearest billion. _____ [1]

   (e) Is 49,752,030,096 greater than or smaller than this number? _____ [1]

   By how much? _____

2. Round each number to the nearest hundred thousand and then estimate the value of

   (a) 899,371 + 6,790,897 [1]

   (b) 5,296,003 – 742,851 [1]

3. Estimate the value of

   (a) 492,396 x 7 (b) 3,899,465 ÷ 9 [2]

   (c) 8304 x 480 (d) 63,854 ÷ 830 [2]

4. Write 84 as a product of its prime factors. [2]

5. Find the value of

(a) 6×10^4 [1]

(b) 101×10^3 [1]

(c) $2^3 \times 3^2 \times 5^2 \times 1^8$ [2]

6. Find the value of

(a) $6 + 2 \times 24 \div 8 - 12 =$ _____ [1]

(b) $48 \div (10 - 4) \times 100 =$ _____ [1]

(c) $12 + (10 + 2) \div (6 \times 2) - 3 =$ _____ [2]

7. Find the missing numbers.

(a) $(38 + 5) \times 3 = (38 \times$ _____ $) + (5 \times$ _____ $)$ [1]

(b) $35 \times 7 = ($ _____ $\times 7) + (5 \times 7)$ [1]

(c) (_____ $) \times 6 = (45 \times 6) - (3 \times 6)$ [1]

(d) $89 \times 4 = (90 \times$ _____ $) - (1 \times$ _____ $)$ [1]

8. Solve using mental calculation.

(a) 498 + 372 = (b) 501 + 845 = [2]

(c) 534 – 398 = (d) 700 – 82 = [2]

(e) 99 x 4 = (f) 29 x 80 = [2]

(g) 25 x 32 = (h) 11 x 12 = [2]

9. Solve. Give your answer as a whole number or a mixed number.

(a) 389 x 64 (b) 6,497 x 83 [2]

(c) 2,304 ÷ 24 (d) 2,176 ÷ 68 [4]

(e) 22 ÷ 8 (f) 4,576 ÷ 24 [4]

10. Sam bought 3 shirts and 2 pairs of pants for $135. Each pair of pants costs $15 more than each shirt. What was the cost of 1 pair of pants? [3]

11. Aaron saved twice as much money as Britney. Carlos saved $70 more than Britney. If they saved $1,790 altogether, how much did Carlos save? [3]

12. Express the value of each of the following in its simplest form.

(a) $3\frac{5}{6}+2\frac{9}{10}$ (b) $5\frac{1}{9}-2\frac{2}{3}$ [2]

(c) $6\times\frac{3}{4}$ (d) $\frac{3}{8}$ of 20 [2]

13. Express the value of each of the following in its simplest form.

(a) $6 \times 2\frac{5}{6}$ (b) $\frac{3}{10} \times \frac{5}{6}$ [4]

(c) $2\frac{3}{4} \times 1\frac{1}{3}$ (d) $\frac{4}{5} \div 8$ [4]

(e) $\frac{9}{10} \div 6$ (f) $5 \div \frac{1}{4}$ [4]

(g) $6 \div \frac{3}{5}$ (h) $\frac{3}{4} \div \frac{5}{8}$ [4]

14. Cathy spent $\frac{4}{5}$ of her money while Josie spent $\frac{1}{2}$ of her money. Both of them had the same amount of money left. If Josie had \$35 left, how much did Cathy have at first? [3]

15. Peter spent $\frac{1}{3}$ of his money on a toy car and $\frac{2}{3}$ of the remainder on a toy boat. He had \$6 left. How much money did he spend altogether? [3]

16. A tank is $\frac{3}{5}$ full with water. If 30 liters more water are needed to fill the tank completely, find the capacity of the tank. [3]

17. (a) How many pieces of string, each $\frac{1}{4}$ meters long, can be cut from a piece of string that is $\frac{7}{8}$ meters long? [2]

(b) How many centimeters of string will be left over? [1]

18. Find the area of a rectangle measuring 6 cm by $4\frac{2}{3}$ cm. [3]