

June, 2020

Dear TCA 8th grade students,

This packet is your summer math work for entering the 8th grade. To receive full credit, you must show all of your work on the page. If there is not enough room, you can use a separate piece of paper and include it with your work. All work should be done in pencil and be neat enough to read. Be sure that you read the directions before starting the problems.

If you have trouble working on the problems, you can look at online resources or ask a parent or friend for help. Some good online resources are: mathisfun.com, khanacademy.com, and purplemath.com.

This work should be spread out over the summer. This math packet is due the first day of school.

Have a great summer!

Ms. Galvinhill

<p>1. Evaluate using order of operations.</p> $6 + (3 + 9) \cdot 10 - 2^3$	<p>2. Evaluate each absolute value expression.</p> $ -12 $ $ 0 $ $ 25 $
<p>3. List the integers in order from least to greatest.</p> <p>-3, 8, 0, 3, -5, -2</p>	<p>4. Evaluate the following expressions.</p> $12 + (-7)$ $-24 + (-8)$ $-30 + 12$
<p>5. Evaluate the following expressions.</p> $-15 - 6$ $4 - 10$ $-8 - (-8)$	<p>6. Evaluate the following expressions.</p> $-12 \cdot -5$ $15 \cdot -3$ $-11 \cdot -30$
<p>7. Evaluate the following expressions.</p> $-40 \div 8$ $120 \div -6$ $-250 \div -25$	<p>8. Use order of operations to evaluate the expression.</p> $(-3)^3 - 2 + 8 \div (-8)$

<p>9. Evaluate the expressions.</p> 5^3 $(-2)^4$	<p>10. Evaluate the expression.</p> 2^{-4} 6^{-2}
<p>11. Solve for x.</p> $x + 6 = 50$ $x + 14 = -5$	<p>12. Solve for x.</p> $x - (-5) = 10$ $x - 4 = -13$
<p>13. Solve for x.</p> $-11x = 33$ $12x = 48$	<p>14. Solve for x.</p> $\frac{x}{8} = 7$ $\frac{x}{-4} = -5$
<p>15. Solve for x.</p> $\frac{x}{7} + 10 = 26$	<p>16. Solve for x.</p> $-5x - 9 = -3$

<p>17. Combine like terms and solve for x.</p> $3x + 4 - 2x + 8x = 22$	<p>18. Combine like terms and solve for x.</p> $-7x - 20 + 12 + 4x = 13$
<p>19. Draw a number line and graph the inequality.</p> $x \geq 7$	<p>20. Draw a number line and graph the inequality.</p> $x < -5$
<p>21. Solve for x and then graph the answer.</p> $\frac{x}{8} - 7 > 2$	<p>22. Solve for x and then graph the answer.</p> $2x + 8 \leq 30$
<p>23. List the decimals in order from least to greatest.</p> <p>4.76, - 5.23, 0.1, 4.74, -21.6</p>	<p>24. List the numbers in order from least to greatest.</p> <p>2.3741, 2.374, 2.384, 2.3831</p>

25. $27.815 + 3.62$	26. $3.5 - 1.257$
27. $35.62 \cdot 0.72$	28. $23.65 \div 0.5$
29. Solve for x. $0.5x - 4.25 = 7.25$	30. Solve for x. $\frac{x}{7} + 11.12 = 15.6$
31. Write in scientific notation. $283,000,000$	32. Write in scientific notation. 0.0004
33. Write in standard form. 3.1×10^5	34. Write in standard form. 8×10^{-3}

<p>35. Convert milliliters to liters.</p> <p>2500 ml</p>	<p>36. Convert kilometers to centimeters.</p> <p>3.4 km</p>
<p>37. Find the prime factorization of 100 using a factor tree.</p>	<p>38. Find the greatest common factor of 90 and 126.</p>
<p>39. Find the least common multiple for 8 and 10.</p>	<p>40. List the numbers in order from least to greatest.</p> <p>$\frac{3}{4}$, $\frac{2}{3}$, 0.72, 0.6, 0.8</p>
<p>41.</p> $\frac{5}{6} + \frac{1}{8}$	<p>42.</p> $3\frac{3}{5} + 5\frac{21}{30}$

43.

$$\frac{1}{2} - \frac{5}{11}$$

44.

$$12\frac{3}{4} - 3\frac{5}{6}$$

45.

$$\frac{3}{8} \cdot \frac{5}{9}$$

46.

$$2\frac{2}{5} \cdot 4\frac{2}{3}$$

47.

$$\frac{3}{20} \div \frac{2}{7}$$

48.

$$6\frac{1}{4} \div 1\frac{3}{5}$$

49. Solve for x.

$$x + \frac{2}{7} = 5$$

50. Solve for x.

$$x - \frac{5}{8} = \frac{1}{4}$$

51. Solve for x.

$$\frac{4}{5}x = \frac{2}{7}$$

52. Solve for x.

$$x \div \frac{5}{12} = \frac{2}{3}$$

53. For every 13 blue pens there are 5 red pens. Write the ratio of blue pens to red pens in each of the following forms.

Word form:

Ratio form:

Fraction form:

54. Alex bought 8 copies of the same book for \$46. What is the unit price?

55. Joanne traveled 330 miles in 7 hours. Find the unit rate.

56. Solve for x.

$$\frac{4}{7} = \frac{10}{x}$$

<p>57. During a magazine sale, 6 students sold 14 subscriptions. Based on this sample, how many subscriptions would 90 students likely sell?</p>	<p>58. Lara is putting tiles down. For every 6 white tiles, there are 2 blue tiles. In total there are 72 tiles. How many white tiles and how many blue tiles are there?</p>
<p>59. A 6 ft. tall man is standing outside. His shadow is 45 ft. long. At the same location, there is a tree with a shadow that is 165 ft. long. How tall is the tree?</p>	<p>60. The scale on a map is $\frac{1}{2}$ inch represents 300 miles. If the distance between two cities on the map is 3 inches, what is the actual distance between the two cities?</p>
<p>61. Write as a percent.</p> $\frac{75}{1000}$	<p>62. Write as a percent.</p> <p>5.72</p>
<p>63. Write as a decimal.</p> <p>21%</p>	<p>64. What is 31% of 250?</p>

<p>65. 35 is what percent of 175?</p>	<p>66. 8 is 4% of what number?</p>
<p>67. Damon made a profit of \$235 dollars at the bake sale last year. This year, he made a profit of \$423. What was the percent increase in his profit? Round to the nearest percent.</p>	<p>68. Jasmine read 6 books last summer. This summer, she read 4 books. What is the percent decrease in the number of books she read? Round to the nearest percent.</p>
<p>69. A bike is marked as \$425. The sales tax is 6%. What is the total cost of the bike with the sales tax included? Round to the hundredths place.</p>	<p>70. A video game cost \$23. The sales tax is 4%. How much is the total cost of the game with the tax included? Round to the hundredths place.</p>