Dear Students:

This packet encompasses the skills you learned in 7th grade that will prepare you for success in 8th grade. Make sure to read the directions for each question CAREFULLY and do what is asked. You MUST show all your work. If you do your work on another sheet of paper, make sure to attach that to the end of the packet when you hand it in to your teacher in September.

This will be your first TEST grade of the new school year so make sure to do your best.

Due Date: Monday, September 9, 2019

Good luck! 😊

The Math Department
Solve.

1. \(-2(-21)(-5)\) 
2. \(-78 \div (-6)\) 
3. \(-65 \div 0\)

4. The water level is 3 feet below your dock. The tide goes out, and the water level lowers 1 foot. A storm surge comes in, and the water level rises 2 feet. Write an integer to indicate the new water level.

Evaluate the expression.

5. \(-13 + (-56) \div 14 + 9\) 
6. \(-16 \cdot 3 - (-36) \div 12\)

7. The table shows a bank account balance for a 5-day period.

<table>
<thead>
<tr>
<th>Day</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance</td>
<td>(-21)</td>
<td>(-55)</td>
<td>102</td>
<td>125</td>
<td>(-16)</td>
</tr>
</tbody>
</table>

a. Which day had the balance closest to zero?

b. Find the range of balances for the 5-day period.

c. What integer represents the change in balance from Monday to Tuesday?

d. Based on the given five balances, what is the average balance for the 5-day period?

Complete the statement using <, >, or =.

8. \(-2.34 \underline{\hspace{1cm}} -2.43\)
Add or subtract. Write fractions in simplest form.

9. \(15.36 + (-12.095)\)  

10. \(-7.91 - (-5.28)\)

11. \(-3\frac{7}{9} + (-2\frac{1}{3})\)  

12. \(\frac{13}{4} - (-4\frac{9}{10})\)

Evaluate the expression when \(x = \frac{5}{8}\), and \(y = \frac{5}{3}\).

13. \(x + y\)  

14. \(-2x + y\)

Evaluate.

15. \(-2\frac{1}{3} \times 5\frac{1}{4}\)

16. How many 0.45-ounce packages of cinnamon can be made with 3.15 ounces of cinnamon?

17. Identify the terms and like terms in the expression.

\(-2t + 3t^2 - 10 - 14t\)

Terms:

Like Terms:
Find the sum or difference.

18. \((3 - 7m) + 2(3.5m + 1)\)

19. Write an expression in simplest form that represents the perimeter of the polygon.

Solve the equation.

20. \(y + 14.6 = -31.75\)

21. \(m - \frac{5}{8} = -\frac{1}{4}\)

22. \(\frac{x}{6.2} = -2.1\)

23. \(-18v = -414\)

Find the value of \(x\).

24. \(5x - 8x = 15\)

25. \(3(x + 1) = -24\)

Write the word sentence as an equation. Then solve.

26. The sum of a number \(a\) and negative 12 is 6.
27. You drink $g$ 8-ounce glasses of water plus a 20-ounce bottle of water. You drank 76 ounces of water today. **Write and solve** an equation to determine the number of glasses of water you drank.

Find the unit rate.

28. 240 kilometers in 2.5 hours

29. $15$ for 4 quarts

Solve the proportion.

30. \[ \frac{2.3}{1.8} = \frac{a}{18} \]

31. \[ \frac{t}{6.5} = \frac{1.2}{1.3} \]

32. \[ \frac{16}{10} = \frac{n + 2}{5} \]

Graph the line that passes through the two points. Then find the slope of the line.

33. \((-4, -3), (4, 3)\)

\[ \text{slope} = \frac{\text{rise}}{\text{run}} \]
Write and solve a proportion to answer the question. \[ \frac{\text{is}}{\text{of}} = \frac{\%}{100} \]

34. What number is 45% of 60?  
35. 48 is what percent of 160?

36. 8 is 0.5% of what number?  
37. What percent of 130 is 182?

Tell whether the angles are adjacent or vertical. Then find the value of \(x\).

38.  
39.  

Tell whether the angles are complementary, supplementary, or neither.

40.  
41.  
Find the value of \( x \).

Then classify the triangle.

42. 

Classify the quadrilateral.

Find the missing angle.

43. 

Find the circumference and area of the circle. Use 3.14 or \( \frac{22}{7} \) for \( \pi \).

44. 

\[ C = 2\pi r \] 
\[ A = \pi r^2 \]

Find the surface area and volume of the prism.

45. 

\[ SA = 2lw + 2lh + 2wh \] 
\[ V = lwh \]

Find the surface area of the cylinder.

46. 

\[ SA = 2\pi r^2 + 2\pi r \]