



SHELTON BOARD OF EDUCATION

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Dear Students and Guardian(s),

According to research, students lose about 2.6 months of learning in mathematics over the summer. This phenomenon, also known as summer slide, can cause students to start the new academic year with a lower achievement level than where they left off at the closure of the prior year. Most importantly, researchers identify long-lasting effects from summer loss related to lower self-confidence, as well as success in school and college.

The Shelton Public School System has developed a Summer Math Challenge that can easily integrate into your summer plans. The program is designed to be developmentally appropriate for your student based on the grade level they will be entering for the 2019-2020 school year. We recommend scheduling time for your learner(s) to participate in this program.

The importance of spending time with family and enjoying the outdoors also provides valuable learning opportunities. Involvement in authentic experiences allow learners for knowledge transfer beyond the classroom and vice versa. Many daily scenarios provide opportunities for problem solving and reasoning, such as estimating time and cost of travel, doubling ingredients in family recipes, planning and budgeting for home projects, probability in sports and playing board games.

Specific Grade Summer Math Challenge for students in grades K-12, can be found at www.sheltonpublicschools.org under the Teaching and Learning tab.

We hope that you will participate in this year's summer math challenge and help our learners in maintaining and improving their math skills, as well as further develop their confidence in math during the summer.

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Shelton Intermediate School
Summer Review Packet
For all students entering
7th Grade Mathematics

Name: _____

Dates worked on: _____

Summer Work Directions:

Required-

- 1) All students are required to complete each of the following exercises in the **summer work packet** using the skills you learned in previous classes. To receive full credit for this assignment, you must show your work and complete ALL of the problems in this packet. You may use a calculator to help with calculations, but you must still show all of your work. For assistance in completing individual problems, you should refer to your notes from previous classes, use online resources such as Khan Academy or work with your peers. I don't know or IDK will not be accepted.
- 2) All students are required to complete **at least 10 IXL strands** from the recommended list. All IXL strands can be found under **Grade 6**.

The completed packet and IXL log is due the second day of class. Each part will count as a grade in math class.

Incentives -

Students have the opportunity to earn tickets to win a TI-84 Plus Graphing Calculator or gift cards to stores/restaurants in the area by completing **more than** 10 IXL strands from the packet. For each additional 20 minutes spent, you will receive one raffle ticket. The more you practice the greater your chances are of winning!

Recommended IXL List - Complete at least 10 IXL strands from the recommended list. All IXL strands can be found under Grade 6.

<u>Skill</u>	<u>Date</u>	<u>SmartScore</u>	<u>Time Spent</u>
<u>1</u> R.1 Write a ratio			
<u>2</u> R.2 Write a ratio using a fraction			
<u>3</u> R.8 Unit Rate			
<u>4</u> R.11 Unit Rate: Word Problems			
<u>5</u> S.2 Convert between percents, fractions and decimals			
<u>6</u> S.7 Percents of a number: with fractional and decimal percents			
<u>7</u> S.9 Find what percent one number is of another: word problems			
<u>8</u> J.3 Add and subtract fractions with unlike denominators			
<u>9</u> J.6 Add and subtract mixed numbers			
<u>10</u> K.10 Multiply three or more fractions and whole numbers			
<u>11</u> L.5 Divide fractions			
<u>12</u> L.7 Divide fractions and mixed numbers			
<u>13</u> O.8 Add, subtract, multiply or divide two fractions: word problems			
<u>14</u> G.1 Add and subtract decimals			
<u>15</u> H.2 Multiple decimals			
<u>16</u> H.4 Divide decimals by whole numbers			
<u>17</u> O.5 Add, subtract, multiple or divide two decimals			
<u>18</u> Y.1 Write variable expressions:one operation			
<u>19</u> Y.3 Write variable expressions: word problems			
<u>20</u> Y.4 Evaluate variable expressions with whole numbers			
<u>21</u> Y.11 Multiply using the distributive property			
<u>22</u> Y.14 Write equivalent expressions using properties			
<u>23</u> Y.15 Add and subtract like terms			
<u>24</u> Z.6 Solve one-step equations with whole numbers			
<u>25</u> Z.7 Solve one step equations with decimals, fractions and mixed numbers.			
<u>26</u> AA.4 Solve one step inequalities			
<u>27</u> FF.3 Area of triangle			
<u>28</u> FF.4 Area of parallelograms and trapezoids			
<u>29</u> FF.5 Area of quadrilaterals			

30. FF.1 Perimeter			
31. FF.14 Volume of cubes and rectangular prisms			
32. HH.1 Identify statistical questions			
33. HH.3 Interpret charts and graphs to find mean, median, mode and range			
34. HH.4 Mean, median , mode and range: find the missing number			

Re-write the percent as a fraction or mixed number in simplest form.

8. 55%

9. 140%

Write the fraction as a percent.

10. $\frac{4}{5}$

11. $\frac{53}{200}$

Find the percent of the number.

12. What is 30% of 50?

13. Find 12% of 85.

14. Find 2% of 96.

15. Find 150% of 66.

16. What is 7% of 120?

17. What is 3% of 15?

The Number System

Computation with Fractions (Recommended IXL Strands: J.3, J.6, K.10, L.5, L.7 and O.8)

18. $\frac{3}{5} + \frac{1}{10}$

19. $\frac{1}{3} \div 4$

20. $3 \times \frac{5}{8}$

21. $\frac{5}{8} \times 2\frac{3}{4}$

22. $4 - 2\frac{2}{5}$

23. $4\frac{1}{8} \div 2\frac{1}{4}$

Computation with Decimals (Recommended IXL Strands: G.1, H.2, H.4 and O.4)

24. $1.5 - 1.06$

25. $2.41 + 6$

26. 6.3×5

27. $4.38 \div 12$

28. $3.8 \div 0.16$

29. How much change should you get back if you bought hot dogs for \$2.52, bread for \$1.99 and a case of water for \$3.85 and paid with a \$20.00 bill? (Don't include tax)

Expressions and Equations

Writing Numerical Expressions (Recommended IXL Strands: Y.1)

30. 14 more than a number x

31. 25 less than a number b

32. A number x divided by 4.

33. The product of 3 and 12

Write the phrase as an expression. Then evaluate when $x = 5$ and $y = 20$.

34. 3 less than the quotient of a number y and 4

35. 6 more than the product of 8 and a number x

Expressions with Variables (Recommended IXL Strands: Y.3 and Y.4)

Evaluate the expression when $a = 10$, $b = 9$ and $c = 4$.

36. $2a + 3$

37. $3a + 2b - 6c$

38. $\frac{c}{2} + 1$

Distributive Property (Recommended IXL Strands: Y.11)

39. $3(x + 4)$

40. $7(8 + x + 2)$

41. $5 + 8(3 + x)$

Equivalent Expressions (Recommended IXL Strands: Y.14 and Y.15)

Simplify each expression.

42. $4x + 7 + 3x$

43. $10x + 2y - 5x$

44. $-6x + x + 8y$

One - Step Equations or Inequalities (Recommended IXL Strands: Z.6, Z.7 and AA.4)

45. $x - 6 \geq 4$

46. $12 < 5 + x$

47. $\frac{x}{3} \leq 2$

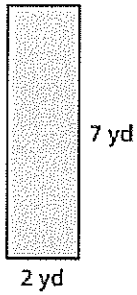
48. $4x > 8$

Geometry

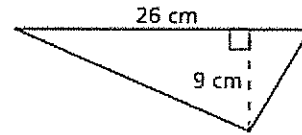
Area (Recommended IXL Strands: FF.3, FF.4 and FF.5)

Find the area of the given shape below.

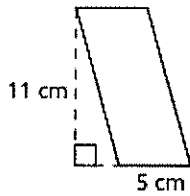
49.



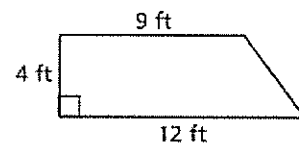
50.



51.

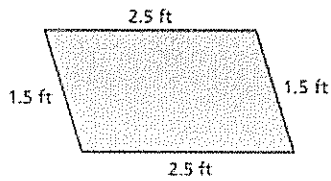


52.

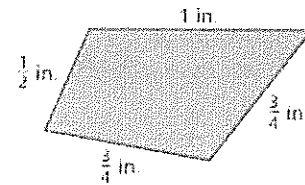


Perimeter (Recommended IXL Strands: FF.1)

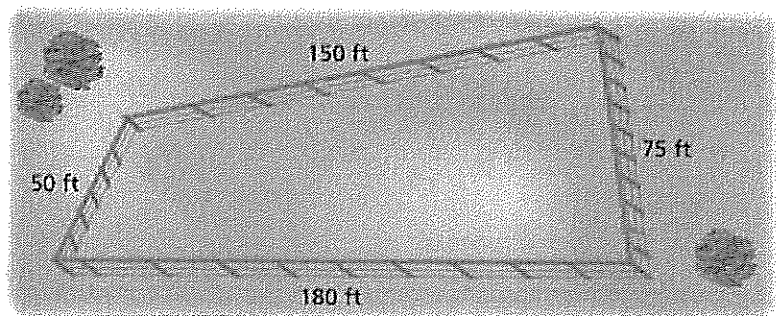
53.



54.



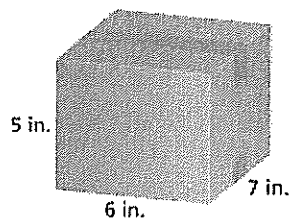
55. You have 450 feet of fencing. Do you have enough to fence the pasture?



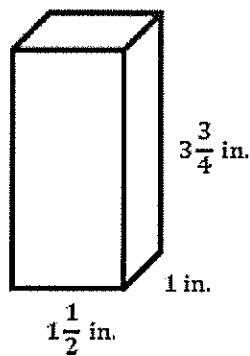
Volume (Recommended IXL Strands: FF.14)

Find the volume of for each rectangular prism.

56.



57.



Statistics and Probability

Find the Mean, Median, Mode and Range of each data set. (Recommended IXL Strands: HH.1, HH.3, and HH.4)

58. 20, 17, 42, 26, 27, 12, 31

59. 15, 10, 12, 10, 13, 13, 13, 10, 3