

Shelton Intermediate School  
Summer Review Packet  
For all students entering  
**7<sup>th</sup> 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.
- 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. For assistance in completing individual problems, you should refer to your notes from previous classes, use online resources or work with your peers.

### **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!

# IXL Activity Log

| <u>Skill</u> | <u>Date</u> | <u>SmartScore</u> | <u>Time Spent</u> |
|--------------|-------------|-------------------|-------------------|
| <u>1</u>     |             |                   |                   |
| <u>2</u>     |             |                   |                   |
| <u>3</u>     |             |                   |                   |
| <u>4</u>     |             |                   |                   |
| <u>5</u>     |             |                   |                   |
| <u>6</u>     |             |                   |                   |
| <u>7</u>     |             |                   |                   |
| <u>8</u>     |             |                   |                   |
| <u>9</u>     |             |                   |                   |
| <u>10</u>    |             |                   |                   |
| <u>11</u>    |             |                   |                   |
| <u>12</u>    |             |                   |                   |
| <u>13</u>    |             |                   |                   |
| <u>14</u>    |             |                   |                   |
| <u>15</u>    |             |                   |                   |
| <u>16</u>    |             |                   |                   |

## **Ratios and Proportional Relationships**

### ***Writing Ratios (Recommended IXL Strands: R.1 and R.2)***

1. Use the table to write the ratio. Explain what the ratio means.

| <b>Marble</b> | <b>Number</b> |
|---------------|---------------|
| Blue          | 8             |
| Red           | 4             |
| Purple        | 6             |

a) Red to Purple

b) Blue to Red

c) Purple : All Marbles

d) All Marbles: Blue

### ***Unit Rate (Recommended IXL Strands: R.7 and R.9)***

Calculate the unit rate of each situation below.

2. 9 strikes in 3 innings

3. 117 points in 13 minutes

4. One of the valves on the Hoover Dam releases 40,000 gallons of water per second. What is the rate in gallons per minute?

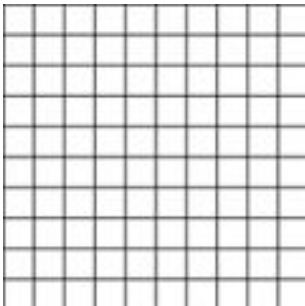
Decide whether the rates are equivalent:

5. 30 beats per 20 seconds and 90 beats per 60 seconds

6. 10 pages in 15 minutes and 15 pages in 20 minutes

### ***Percent Problems (Recommended IXL Strands: S.7 and S.9)***

7. Use the 10 x 10 grid below to model 43%



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.7)***

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

19.  $\frac{1}{5} \div 4$

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.  $6.3 \times 5$

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)

***Adding and Subtracting Integers (Recommended IXL Strands: N.2 and N.4)***

30.  $-8 + 4$

31.  $-12 + (-15)$

32.  $8 + (-4)$

33.  $7 - 13$

34.  $-4 - 6$

35.  $9 - (-13)$

**Expressions and Equations**

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

36. 14 more than a number  $x$

37. 25 less than a number  $b$

38. A number  $x$  divided by 4.

39. The product of 3 and 12

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

40. 3 less than the quotient of a number  $y$  and 4

41. 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  $c = 4$ .

42.  $2a + 3$

43.  $3a + 2b - 6c$

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

***Distributive Property (Recommended IXL Strands: Y.10)***

45.  $3(x + 4)$

46.  $7(8 + x + 2)$

47.  $5 + 8(3 + x)$

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

Simplify each expression.

48.  $4x + 7 + 3x$

49.  $10x + 2y - 5x$

50.  $-6x + x + 8y$

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

51.  $x - 6 \geq 4$

52.  $12 < 5 + x$

53.  $\frac{x}{5} \leq 2$

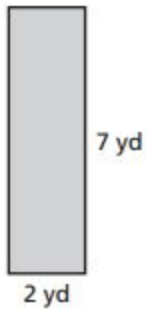
54.  $4x > 8$

**Geometry**

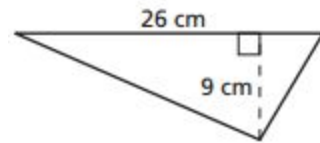
**Area (Recommended IXL Strands: FF.3, FF.4 and FF.5)**

Find the area of the given shape below.

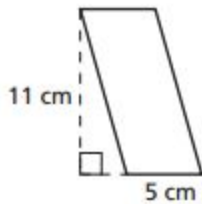
55.



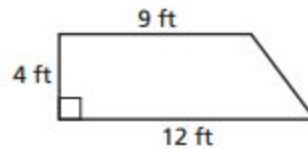
56.



57.

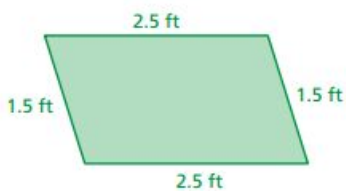


58.

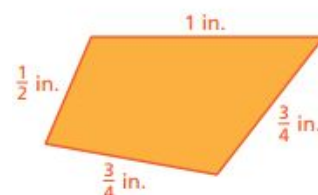


**Perimeter (Recommended IXL Strands: FF.1)**

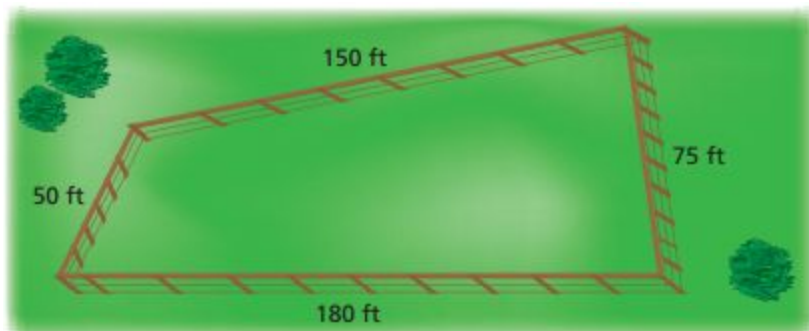
59.



60.



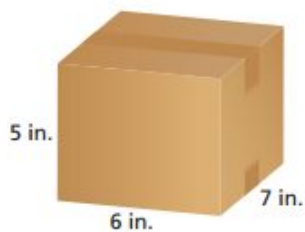
61. You have 450 feet of fencing. Do you have enough to fence the pasture?



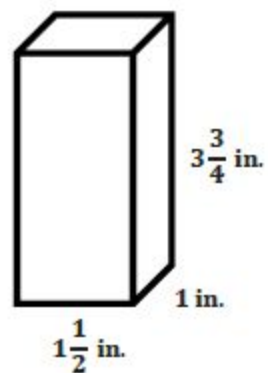
**Volume (Recommended IXL Strands: FF.14)**

Find the volume of for each rectangular prism.

62.



63.



**Statistics and Probability**

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

64. 20, 17, 42, 26, 27, 12, 31

65. 15, 10, 12, 10, 13, 13, 13, 10, 3