2023 SUMMER MATH PACKET: 7th to 8th GRADE

This summer, we encourage you to continue to practice your mathematics at home. Practicing math skills over the summer can keep the brain's pathways for computation and mathematical vocabulary strong.

Return to Ms. Eagen on the 1st day of school.

DIRECTIONS

1. Do NOT use a calculator (unless specified). Take time to "grow your brain" and practice your math facts.

2. Show all work! An important aspect of mathematics is being able to communicate the process you use to arrive at your answer. It also provides an opportunity to review your thinking when making corrections to your work.

3. Be neat and organized! Part of success in math is being able to organize your work and keep track of your calculations and steps. Use all the paper you need to neatly show your work.

4. **Box** or **Circle** your final answers (another organizational strategy).

5. Do not rush! Take advantage of the summer pace and see if you digest more of what you're working on.

6. If you are stuck on a problem, read the example problems provided at the beginning of each exercise. If you are still stuck, check out one of the math websites listed below.

RESOURCES

For help with a **TOPIC**: www.purplemath.com and select 7th grade on the left hand column, then select the topic from the top.

For **MATH FACT PRACTICE**: www.aplusmath.com and select flash cards. You can switch the operation and difficulty each time.

Resources for help relearning a topics:

www.khanacademy.org

IXL: SEE REQUIRED IXL's for this summer, but for additional practice complete as many as you want for 7th GRADE.

Required IXL

90% on each of the below IXL: LOG into 2022-2023 account to get credit

7th Grade Math

- ☐ D1
- ☐ D2
- ☐ D4
- ☐ P1
- ☐ P2
- ☐ P3
- ☐ P4

8th Grade Math

- ☐ A1
- ☐ A3
- ☐ A5
- ☐ A6
- ☐ B1
- ☐ B3
- ☐ B4
- ☐ C1
- ☐ C3
- ☐ C6
- ☐ C7
- ☐ D1
- ☐ D2

Summer Math - Rising 8th Grade WEEK 1

1. $^{-}4 + {}^{+}6 =$

A. -8

B. 10

C. -2

D. 2

7.NS.1b

2. Which of the following is a factor of $10x + 5$?

A. 5

B. 10

C. x

D. 5x

7.EE.1

3. $5\frac{1}{10} - 1\frac{7}{10} =$

A. $3\frac{3}{5}$

B. $6\frac{4}{5}$

C. $3\frac{2}{5}$

D. $3\frac{3}{10}$

7.NS.1d

4. Solve for a

$$3a - 1 = 5$$

A. $a = \frac{3}{5}$

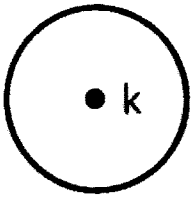
B. $a = 2$

C. $a = 3$

D. $a = \frac{5}{3}$

7.EE.4a

5. What is k?



A. Chord
B. Diameter
C. Radius
D. Center

7.G.4

6. What is the range for the following numbers?

5, 1, 12, 3, 4, 2, 10

A. 9

B. 10

C. 11

D. 12

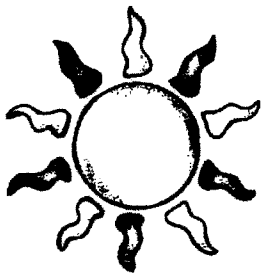
7.SP.4

1. Write 7,000,000 in words.	2. Round 48,377 to the nearest thousand.	3. Add 632 + 577 + 298
4. Subtract 6000 – 3956	5. Multiply 37 x 26.	6. Divide 4036 ÷ 25.Write your remainder as a fraction.
7. 12 CD's cost $30. How much will 18 CD's cost?	8. Paul ran 400 yards. How many feet did he run?	9. Subtract 6025 – 1773.
10. Multiply 248 x 72.	11. Solve $\frac{n}{25} = 42$	12. Convert: 6.5 yards = _____ feet

Summer Math - Integers
WEEK I

See how many questions you can answer correctly in 6 minutes. Use a timer to help keep time.

Write the number you completed correctly in the sun.



$^{+}1 + {}^{-}5 =$ _____	$^{+}30 \div {}^{-}5 =$ _____	$^{+}5 - {}^{-}2 =$ _____
$^{-}12 \div {}^{-}3 =$ _____	$^{-}2 + {}^{-}3 =$ _____	$^{-}6 \times {}^{+}7 =$ _____
$^{+}3 - {}^{-}1 =$ _____	$^{+}1 \times {}^{-}7 =$ _____	$^{+}27 \div {}^{+}3 =$ _____
$^{-}4 \times {}^{-}4 =$ _____	$^{-}9 - {}^{+}4 =$ _____	$^{-}8 + {}^{+}3 =$ _____
$^{-}18 \div {}^{+}3 =$ _____	$^{-}8 + {}^{+}1 =$ _____	$^{-}9 \times {}^{+}8 =$ _____
$^{+}5 + {}^{-}5 =$ _____	$^{-}56 \div {}^{-}7 =$ _____	$^{+}1 - {}^{-}2 =$ _____

Summer Math - Rising 8th Grade WEEK 2

7. Jack made a scale drawing of the golf course. On the real golf course, the distance to the 8th hole is 360 yards. On his drawing, the distance to the 8th hole is 18 cm. What is the scale of Jack's drawing?

A. 1 cm = 20 yards

B. 20 cm = 1 yard

C. 1 cm = 15 yards

D. 15 cm = 1 yard

7.G.1

8. Using the following numbers, would the mode change if the number 19 was added?

24, 18, 22, 24, 19, 17, 24

A. No

B. Yes, the mode would change to 19

C. Yes, the mode would change to 20

D. Yes, the mode would change to 21

7.SP.4

9. A 4 lb. bag of salt water taffy from the beach costs $15.12. What is the unit rate?

A. $15.12/lb

B. $3.78/lb

C. $3.79/lb

D. $3.77/lb

7.RP.1

10. $^{-}9 - {}^{-}3 =$

A. -6

B. -12

C. 6

D. 12

7.NS.1b

11. Taylor collected 4 white shells and 9 grey shells. If she put all the shells in a bucket and randomly pulled one out, what is the probability that the shell would be white?

A. $\frac{9}{9}$

B. $\frac{9}{13}$

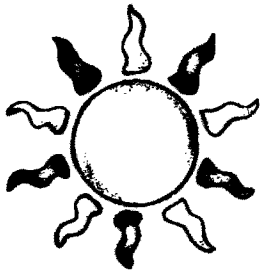
C. $\frac{4}{13}$

D. $\frac{4}{9}$

7.SP.5

1. Give the quotient. Round to the nearest hundredth. 41.53 ÷ 2.7	2. Solve. $\frac{n}{6} = 12$	3. What is the least common multiple of 9 and 12?
4. $7\frac{3}{4} - 5\frac{1}{6}$	5. $\frac{7}{8} \div \frac{1}{4}$	6. $3\frac{5}{12} + 2\frac{1}{3}$
7. $6 - 2\frac{3}{7}$	8. 0.23 x 10 = _____ 0.23 x 100 = _____ 0.23 x 1000 = _____	9. 5^2 = _____ 12^2 = _____ 4^3 = _____ $(\frac{1}{3})^3$ = _____
10. 8003 – 4297	11. Find the GCF of the following numbers: 8, 16	12. Evaluate the expression $12 \div (1 + 3^3 - 2^4)$

Summer Math - Order of Operations with Integers
WEEK 2



See how many questions you can answer correctly in 5 minutes. Use a timer to help keep time.

Write the number you completed correctly in the sun.

$-4(3 \times -3) + 4 =$ ___ $(-2)^2 + -5 =$ ___ $(-5 - -3) \times 2 =$ ___

$(-20 \div 5) + (-1)^2 =$ ___ $(-2 - 1) \times (-5 - 3) =$ ___ $3^2 - (-49 \div -7) =$ ___

$(-3 \times 6) - -10 =$ ___ $(-2)^3 - -10 =$ ___ $(-4 + -6) \div (-5 - 0) =$ ___

Summer Math - Rising 8th Grade WEEK 3

12. $3 \times -\frac{1}{8} =$

A. $-\frac{3}{8}$

B. $\frac{3}{8}$

C. $\frac{8}{3}$

D. 24

7.NS.2c

13. What is 80% of $75?

A. $60

B. $15

C. $75

D. $6000

7.RP.3

14. Which expression is equivalent to -5(k + 3)?

A. 5k + 15

B. 5k – 15

C. -5k – 15

D. -5k + 15

7.EE.1

15. Which fraction is equivalent to $\frac{2}{3}$?

A. $\frac{9}{12}$

B. $\frac{5}{9}$

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

D. $\frac{4}{6}$

7.EE.3

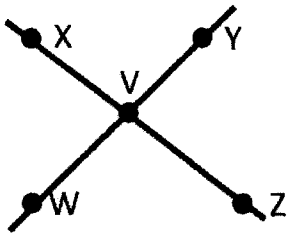
16. Which angle is vertical to ∠XVY?

A. ∠YVZ

B. ∠WVZ

C. ∠XVW

D. ∠ZVW



7.G.5

17. Marco surveyed the first 10 people who arrived at the pool. He asked them what they thought was the best time to close the pool. What type of sample is this?

A. Representative

B. Random

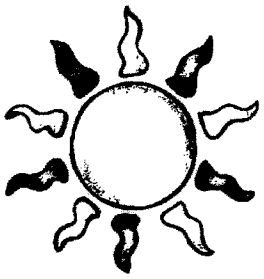
C. Biased

D. Basic

7.SP.1

1. Simplify $(20 + 4) \div 2 \bullet 2$	2. Round 67.751 to the nearest one.	3. Add. $3.98 + 42.7$
4. Subtract $5.007 - 0.389$	5. Alan bought five 12 cent stamps and twenty 18 cent stamps. What was the total cost of the stamps?	6. Round 5.3692 to the nearest thousandth.
7. Find the sum. $82.5 + 6.98$	8. Find the difference. $38.2 - 3.45$	9. Find the ***perimeter*** of a rectangle whose ***area*** is 132 mm^2 and *base* is 12 mm.
10. Solve $x + 33 = 70$	11. $5\frac{1}{2} + 2\frac{3}{4}$	12. $8\frac{1}{4} - 2\frac{5}{8}$

Summer Math - Solving Equations
WEEK 3



See how many questions you can answer correctly in 5 minutes. Use a timer to help keep time. Use the check to substitute your answer back into the question.

Write the number you completed correctly in the sun.

1. $a - 10 = 20$

Check:

2. $y + 5 = -10$

Check:

3. $4x + 3x = 14$

Check:

4. $36 = 9y - 3y$

Check:

Summer Math - Rising 8th Grade WEEK 4

18. Which of the following is an equivalent ratio for 2:5?

A. 5:2

B. 4:15

C. 4:10

D. 6:20

7.RP.2a

19. Which integer represents growing 2 inches over the summer months?

A. -2

B. +2

C. -1

D. +1

7.NS.1c

20. What is the absolute value of -19?

A. 19

B. -19

C. 0

D. There is no absolute value for -19

7.NS.1a

21. $^{-}9 \times {}^{-}6 =$

A. 63

B. $^{-}63$

C. 54

D. $^{-}54$

7.NS.2a

22. Solve for c

$$2c - 3 > 5$$

A. $c < 1$

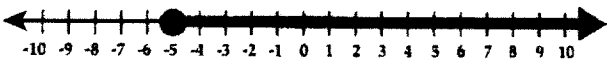
B. $c > 1$

C. $c < 4$

D. $c > 4$

7.EE.4b

23. Which inequality does this number line show?



A. $x \geq -5$

B. $x > -5$

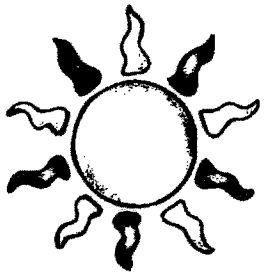
C. $x \leq -5$

D. $x < -5$

7.EE.4b

1. $\frac{2}{3} \times 6$	2. $2\frac{3}{8} \div 1\frac{1}{3}$	3. Divide 14,280 ÷ 136
4. 37.6 – 2.54	5. 5.84(6.5)	6. 7.93 ÷ 2.6
7. What is the greatest common factor of 9 and 12?	8. $\frac{2}{5} - \frac{1}{3}$	9. $2\frac{3}{5} + 1\frac{1}{5}$
10. Adele had 18 books. This was 3 times as many as Vera had. How many books did Vera have?	11. Alan weighs 72.64 kg. How many pounds does Alan weigh?	12. 62.8 – 3.54

Summer Math - Fraction, Decimal, & Percent
WEEK 4



See how many questions you can answer correctly in 10 minutes. Use a timer to help keep time.

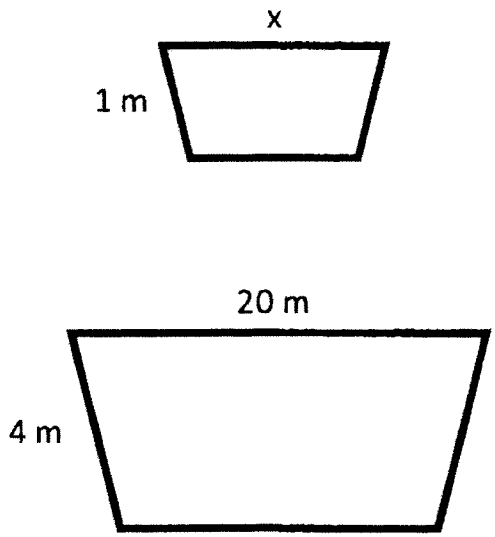
Write the number you completed correctly in the sun.

Fill in the table for the correct fraction, decimal or percent. If needed, round percent to the tenths place.

Fraction	Decimal	Percent
$\frac{1}{2}$		
	0.2	
		10%
	0.25	
$\frac{1}{8}$		
	0.75	
		33.3%
	0.4	
$\frac{1}{6}$		
		60%

Summer Math - Rising 8th Grade WEEK 5

24. If these 2 shapes are similar, what is the length of x?



A. 5 m

B. 4 m

C. 20 m

D. 16 m

7.G.1

25. The diameter of the circle is 4 miles. What is the area of the circle? Use 3.14 for Π.

A. 6.28 miles^2

B. 25.12 miles^2

C. 12.56 miles^2

D. 50.24 miles ^{2}

7.G.4

26. $-81 \div 9 =$

A. -9

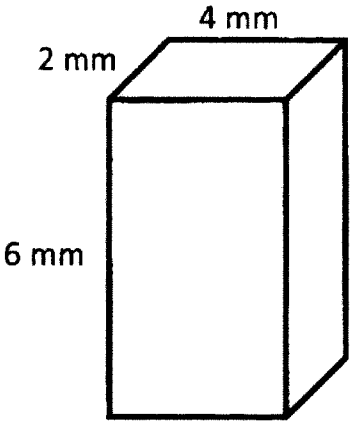
B. +9

C. -8

D. +8

7.NS.2b & 7.NS.2

27. What is the surface area of this rectangular prism?



A. 48 mm^2

B. 44 mm^2

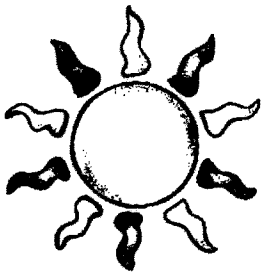
C. 88 mm^2

D. 176 mm^2

7.G.6

1. 3.26 x 1.5	2. Find the mean of 6.8, 3.5, 9.2, 7.45, 6.05.	3. What is the prime factorization of 24?
4. $\frac{5}{9} + \frac{5}{6}$	5. $1\frac{4}{5} - \frac{2}{3}$	6. $2\frac{1}{2} \bullet 4\frac{1}{4}$
7. Write $\frac{4}{5}$ as a decimal.	8. Write 0.25 as a percent.	9. 75% of 48 = _____
10. What percent of 85 is 17?	11. 6.2 + 3.8 + 0.57	12. 3.216 ÷ 0.08

Summer Math - Mean, Median, Mode & Range
WEEK 5



See how many questions you can answer correctly in 5 minutes. Use a timer to help keep time.

Write the number you completed correctly in the sun.

Using the numbers below, what is the mean, median, mode, and range?

10, 10, 8, 7, 10

Mean: _____

Median: _____

Mode: _____

Range: _____

Using the numbers below, what is the mean, median, mode, and range?

14, 28, 33, 18, 33, 27, 13, 26

Mean: _____

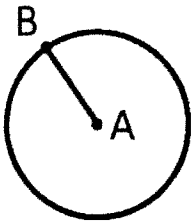
Median: _____

Mode: _____

Range: _____

Summer Math - Rising 8th Grade WEEK 6

28. What is $\overline{AB}$?



A. Center

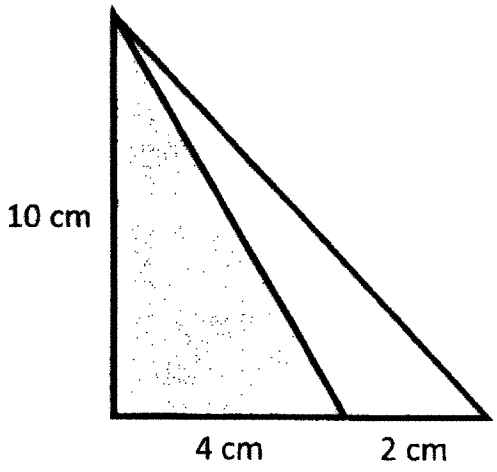
B. Chord

C. Diameter

D. Radius

7.G.4

29. What is the area of the shaded region?



A. 20 cm^2

B. 40 cm^2

C. 30 cm^2

D. 15 cm^2

7.G.6

30. This table shows the amount of money earned at a lemonade stand.

Glasses of Lemonade	2	4	6
Money Earned	$1	$2	$3

How much money does one glass of lemonade cost based on the table above?

A. $1.50/glass

B. $1.00/glass

C. $0.50/glass

D. $2.00/glass

7.RP.2b

31. Your favorite soccer player scored 1 goal after taking 5 shots on goal. What is the experimental probability that he will score on his next shot on goal?

A. $\frac{1}{10}$

B. $\frac{1}{5}$

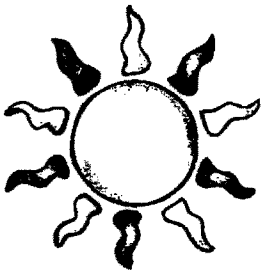
C. $\frac{1}{25}$

D. $\frac{1}{6}$

7.SP.6

1. What is the prime factorization of 56?	2. $\frac{5}{6} \cdot \frac{2}{3}$	3. What is the reciprocal of $\frac{7}{10}$?
4. $\frac{4}{15} \div \frac{1}{3}$	5. Solve. $n - 6 = 15$	6. Solve. $y + 27 = 36$
7. Solve. $12n = 108$	8. Lee has some money in his wallet. He buys a book for $13. Then he has $28 left in his wallet. How much money did he have before he bought the book?	9. Find each product: $\frac{2}{5}$ of 40 _____ $\frac{7}{8}$ of 48 _____ $\frac{1}{4}$ of 36 _____
10. Name the % for each fraction. $\frac{4}{5}$ = _____ $\frac{1}{4}$ = _____	11. Write each decimal as a percent. 0.59 = _____ 0.7 = _____ 0.418 = _____ 7.3 = _____	12. $5\frac{1}{4} - 4\frac{2}{3}$

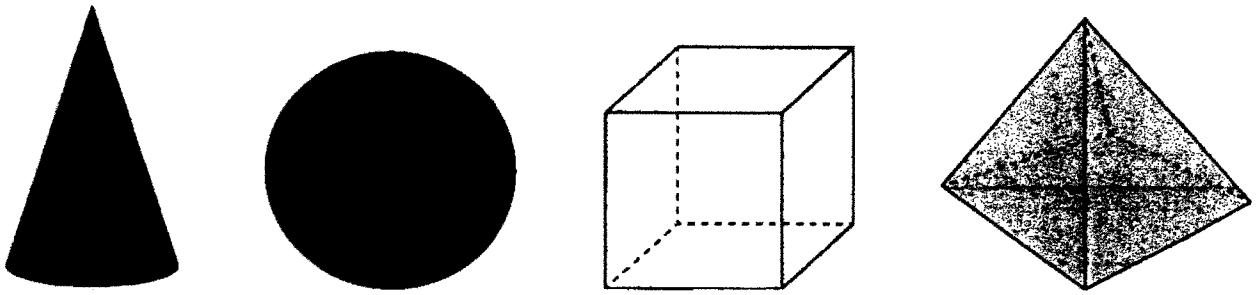
Summer Math - 2 and 3 Dimensional Shapes
WEEK 6



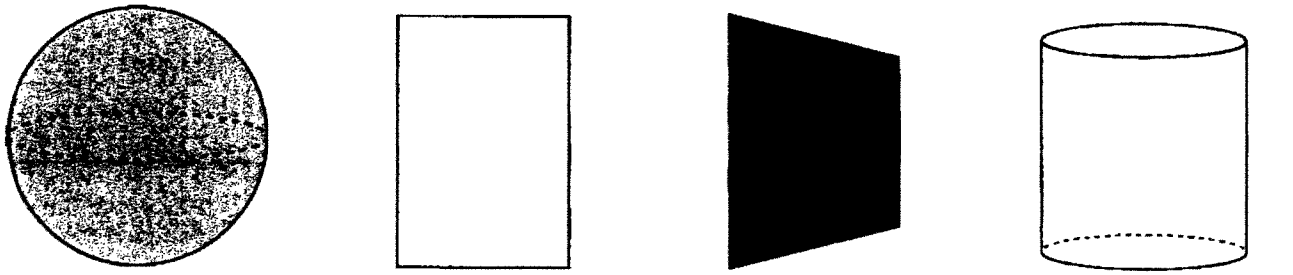
See how many questions you can answer correctly in 5 minutes. Use a timer to help keep time.

Write the number you completed correctly in the sun.

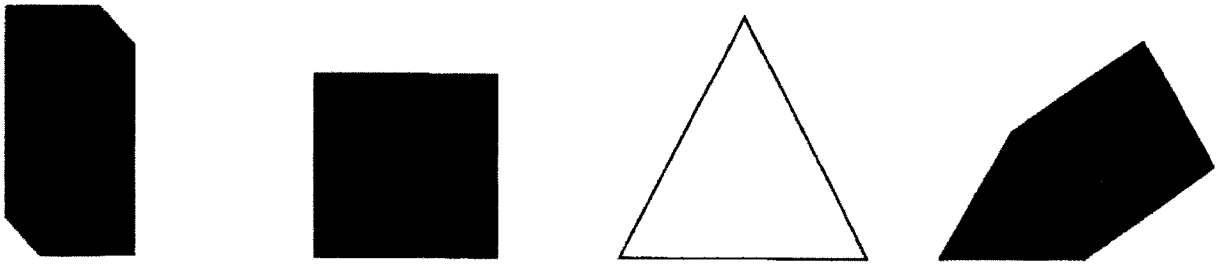
Describe the shapes below with the following words:
Cube, Square, Rectangle, Sphere, Cylinder, Trapezoid, Rectangular Prism, Pyramid, Triangular Prism, Triangle, Cone, and Circle.



_____ _____ _____ _____



_____ _____ _____ _____



_____ _____ _____ _____

Summer Math - Rising 8th Grade WEEK 7

32. What is the linear equation for these values of x and y?

A. $y = x + 1$

B. $y = 2x - 1$

C. $y = 2x$

D. $y = 2x + 1$

x	y
0	1
1	3
2	5
3	7

7.RP.2c

33.
$$\begin{array}{r} 43.21 \\ -\ 18.54 \\ \hline \end{array}$$

A. 24.66

B. 24.67

C. 24.57

D. 24.56

7.NS.1d

34. If you have a deck of 52 playing cards, what is the probability that you will draw a king?

A. $\frac{1}{13}$

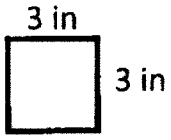
B. $\frac{1}{52}$

C. $\frac{4}{13}$

D. $\frac{3}{52}$

7.SP.7a

35. You have a square with sides equal to 3 inches. If you double the length of the side, how does that affect the area?



A. The area of the new square doubles.

B. The area of the new square is halved.

C. The area of the new square is 4 times the area of the old square.

D. The area of the new square is 6 times the area of the old square.

7.G.1

36. Two girls are shopping for a gift for one of their mutual friends. They are shopping together to make sure they don't buy the same gift. Are these 2 events dependent or independent?

A. These events are dependent.

B. These events are independent.

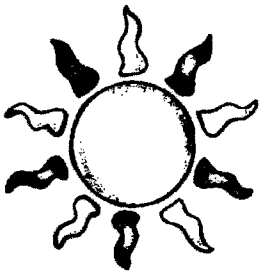
C. These events are both dependent and independent.

D. These events are neither dependent or independent.

7.SP.8a

1. $\frac{7}{10} \div \frac{3}{8}$	2. Find the LCM of 12 and 20.	3. Solve the proportion. $\frac{14}{n} = \frac{21}{54}$
4. 12% of what number is 42?	5. Find the unit price if a store sells 8 bars of soap for $2.96.	6. Compare using < or >. 0.073 _____ 0.07 0.9 _____ 0.09 4.58 _____ 4.6
7. (12 + 6) ÷ 2 x 3 =	8. 12 + 6 ÷ 2 x 3	9. Solve. 8n = 72
10. Divide: 0.8 ÷ 0.016	11. Write in order from least to greatest. 7.631; 7.64; 7.463	12. 45% of 20

Summer Math - Multiplying & Dividing Decimals
WEEK 7



See how many questions you can answer correctly in 7 minutes. Use a timer to help keep time.

Write the number you completed correctly in the sun.

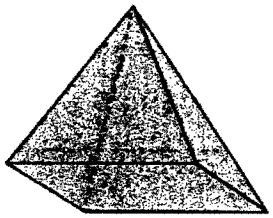
1.250×0.4	23.15×5.3	562.9×0.18	0.8097×0.94

$2.4\overline{)12.24}$ $\quad$ $0.39\overline{)10.53}$ $\quad$ $0.78\overline{)0.7332}$

$1.3\overline{)5.655}$ $\quad$ $25\overline{)14.65}$ $\quad$ $0.19\overline{)185.06}$

Summer Math - Rising 8th Grade WEEK 8

37. What is the name of this figure?



A. triangular prism
B. pyramid
C. rectangular prism
D. sphere

7.G.3

38. To find out how many rabbits were in a park, students tagged 10 rabbits.

They later came back to the park and counted 200 total rabbits and 5 of them were tagged.

Using this information, what is the best estimate for the total number of rabbits in the park?

A. 400
B. 200
C. 600
D. 800

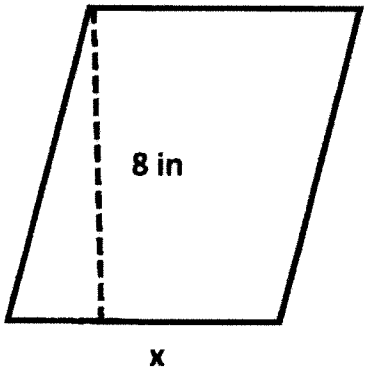
7.SP.2

39. $0.775 \div 3.1 =$

A. 250
B. 25
C. 2.5
D. 0.25

7.NS.2c

40. If the area is 64 inches squared, what is the missing length?



A. x = 8 in
B. x = 16 in
C. x = 4 in
D. x = 9 in

7.G.6

1. Kate has 4 ½ pounds of sliced turkey. She is making huge poboys that have ¾ pounds of meat on each sandwich. How many turkey poboys can be made?

   A. $5\frac{1}{4}$ B. 6 C. $3\frac{3}{4}$

2. Larry works 5 hours each day. How many hours does he work in 6 days?

   A. $11\frac{3}{4}$ B. $30\frac{3}{4}$ C. $34\frac{1}{2}$

3. Mr. Clarke buys 6 English ivy plants for $5.95 each and 4 flower pots for $2.75 each. How much does Mr. Clarke spend in all?

   A. $35.70
   B. $38.50
   C. $46.70

4. Write as an improper fraction.

   $3\frac{5}{8}$

   $5\frac{9}{10}$

   $4\frac{2}{9}$

5. Write as a mixed number.

   $\frac{32}{3}$

   $\frac{25}{4}$

   $\frac{38}{9}$

Compare using <, >, or =.

$\frac{7}{15}$ ____ $\frac{7}{10}$

$\frac{7}{9}$ ____ $\frac{2}{3}$

6. Solve.

   $\frac{3}{9} = \frac{n}{36}$

7. Solve.

   $\frac{2}{3} = \frac{12}{n}$

8. Solve.

   $\frac{n}{15} = \frac{2}{5}$

9. Use an integer to describe the following situation.

   The altitude of Death Valley is 282 feet below sea level.

10. Use an integer to describe the following situation.

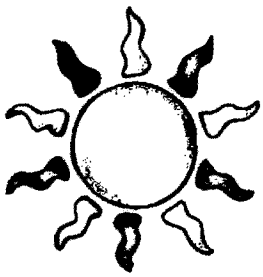
    Mount Hood is 11,239 feet above sea level

11. Compare using <, >, or =.

    -11 _____ 8

    -13 _____ -16

Summer Math - Fractions
WEEK 8



See how many questions you can answer correctly in 7 minutes. Use a timer to help keep time.

Write the number you completed correctly in the sun.

$3\frac{4}{5} + 1\frac{1}{10} =$ _____ $8\frac{1}{9} - 3\frac{1}{3} =$ _____ $4\frac{3}{4} + 1\frac{7}{8} =$ _____

$2\frac{4}{5} \times 1\frac{3}{7} =$ _____ $9\frac{1}{7} \times 6\frac{1}{8} =$ _____ $13\frac{1}{2} \times 2\frac{2}{9} =$ _____

$\frac{5}{8} \div \frac{10}{4} =$ _____ $\frac{9}{5} \div \frac{81}{25} =$ _____ $\frac{7}{16} \div \frac{49}{4} =$ _____