

Magnolia School

6th Grade Summer Math Packet

Math is a subject that continually builds on itself. Having a solid foundation in math is important for continued growth and learning in the subject. Keeping this in mind, we have put together a summer packet to help our students stay sharp over the summer. This packet contains an overview of different concepts that were learned in 5th grade.

All students should complete this packet and bring it with them on the first day of school. We will review the material as a class and go over any questions.

Students should show their work on each problem and use additional paper as needed. We are looking forward to seeing you in school soon!

REFERENCE

Conversions

1000 milliliters (mL) = 1 liter (L)
1000 grams (g) = 1 kilogram (kg)
12 inches (in) = 1 foot (ft)
3 ft = 1 yard (yd)
1760 yd = 1 mile (mi)
8 fluid ounces (fl oz) = 1 cup (c)
2 c = 1 pint (pt)
2 pt = 1 quart (qt)
4 qt = 1 gallon (gal)
16 ounces (oz) = 1 pound (lb)
2000 lb = 1 ton (T)

Fractions

To find a common denominator, find the least common multiple of the denominators in the problem.

Formulas

Perimeter of squares and rectangles:

$$P = (2 \times \ell) + (2 \times w)$$

Area of squares and rectangles:

$$A = \ell \times w$$

ℓ = length, w = width

Order of operations

P: Parenthesis

E: Exponents

MD: Multiplication or Division
(from left to right)

AS: Addition or Subtraction
(from left to right)

Decimals

Line up the decimals when adding and subtracting.
Count decimal places when multiplying.

Place Value

Write the place of the underlined digit. Then write its value.

1 <u>0</u> .1	9.6 <u>3</u>	3 <u>6</u> ,250	0. <u>4</u> 5
<u>7</u> 3	6, <u>4</u> 23,728	<u>2</u> 5.79	22. <u>3</u>

Rounding

Round each number to the nearest ten and hundred.

6709	1256	345	999
940,067	11,987	567	123

Factors

List all the factors of each number.

12	108	18	22
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Multiples

List the first ten nonzero multiples of each number.

4	6	10	12
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Divisibility

Which numbers are divisible by 2? by 5? by 10?

300	7875	22,892	360,000
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Add and Subtract Whole Numbers and Decimals

Find each sum or difference.

$5751 + 756$	$0.56 + 0.41$	$536 + 143$	$0.8 + 0.47$
$8164 + 4676$	$0.44 + 0.3 + 0.85$	$17,243 + 63$	$\$9.78 + \$43.85 + \$5$
$4816 - 1932$	$0.74 - 0.39$	$489 - 366$	$0.81 - 0.6$
$6244 - 29$	$0.7 - 0.46$	$36,243 - 13,963$	$\$14.97 - \10.49

Multiply and Divide Whole Numbers and Decimals

Find each product or quotient.

55×6	7×8.6	613×9	92×7.2
7×27	32×0.4	32×46	$5 \times \$5.20$
$522 \div 2$	$0.84 \div 3$	$1470 \div 5$	$29.1 \div 4$
$288 \div 3$	$2.43 \div 3$	$1,232 \div 4$	$\$10.35 \div 9$

Add and Subtract Fractions


Find each sum or difference. Write each answer in simplest form.

$\frac{3}{5} + \frac{1}{5}$	$\frac{5}{9} + \frac{1}{9}$	$\frac{1}{12} + \frac{7}{12}$
$\frac{8}{10} + \frac{7}{10}$	$\frac{2}{5} + \frac{3}{5}$	$\frac{12}{12} - \frac{12}{12}$
$\frac{2}{3} - \frac{1}{3}$	$\frac{7}{12} - \frac{5}{12}$	$\frac{11}{24} - \frac{2}{24}$

Graphs

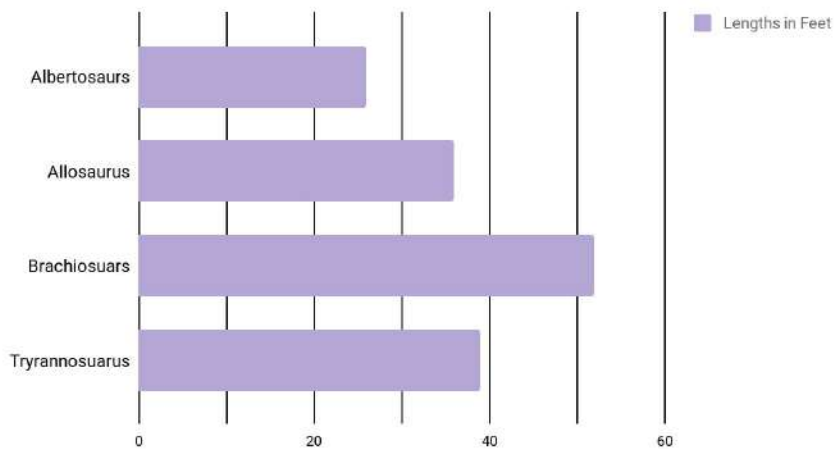
Solve using the pictograph and bar graph.

Basketball Games Won	
Jenny	
Joan	
Jacob	
Jack	
Key: Each  = 2 games	

How many games does  represent?

How many more games did Joan win than Jack?

Lengths of Dinosaurs



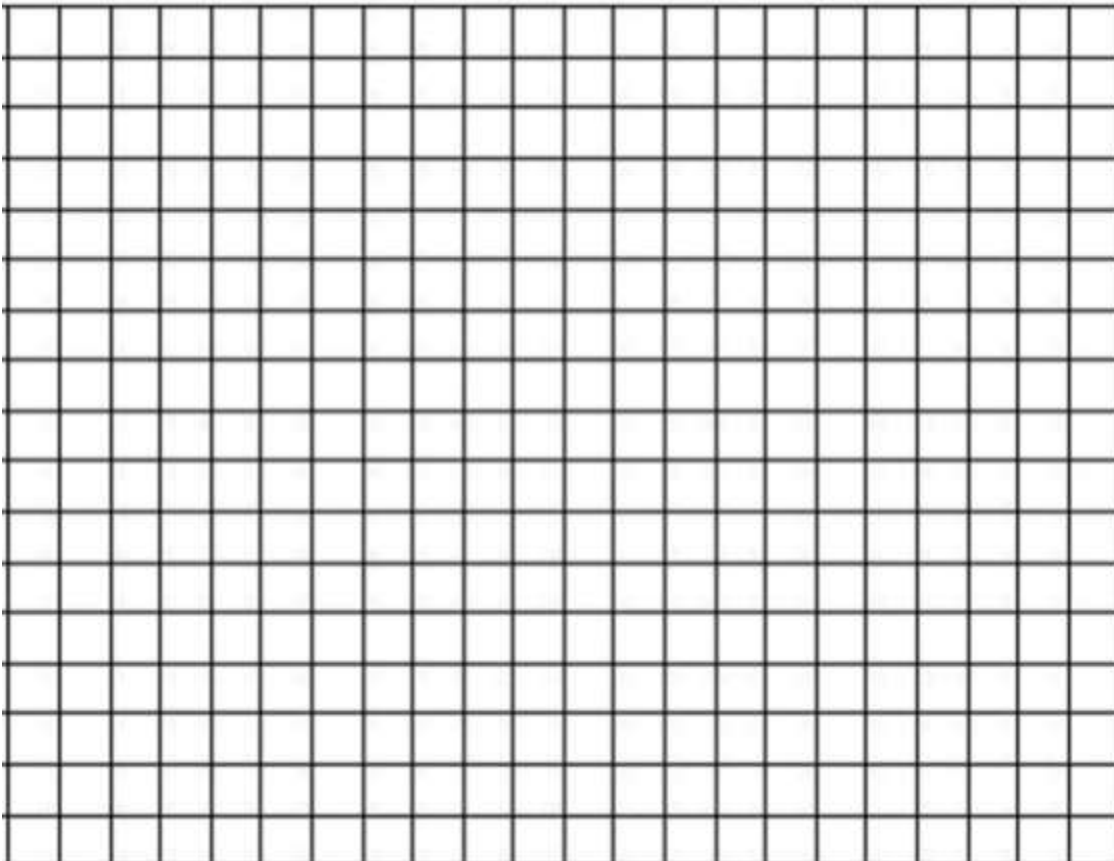
What data are along the vertical axis? the horizontal axis?

Which dinosaurs have lengths between 30 and 40 feet?

Bar Graph

Make a bar graph to display the data in the table.

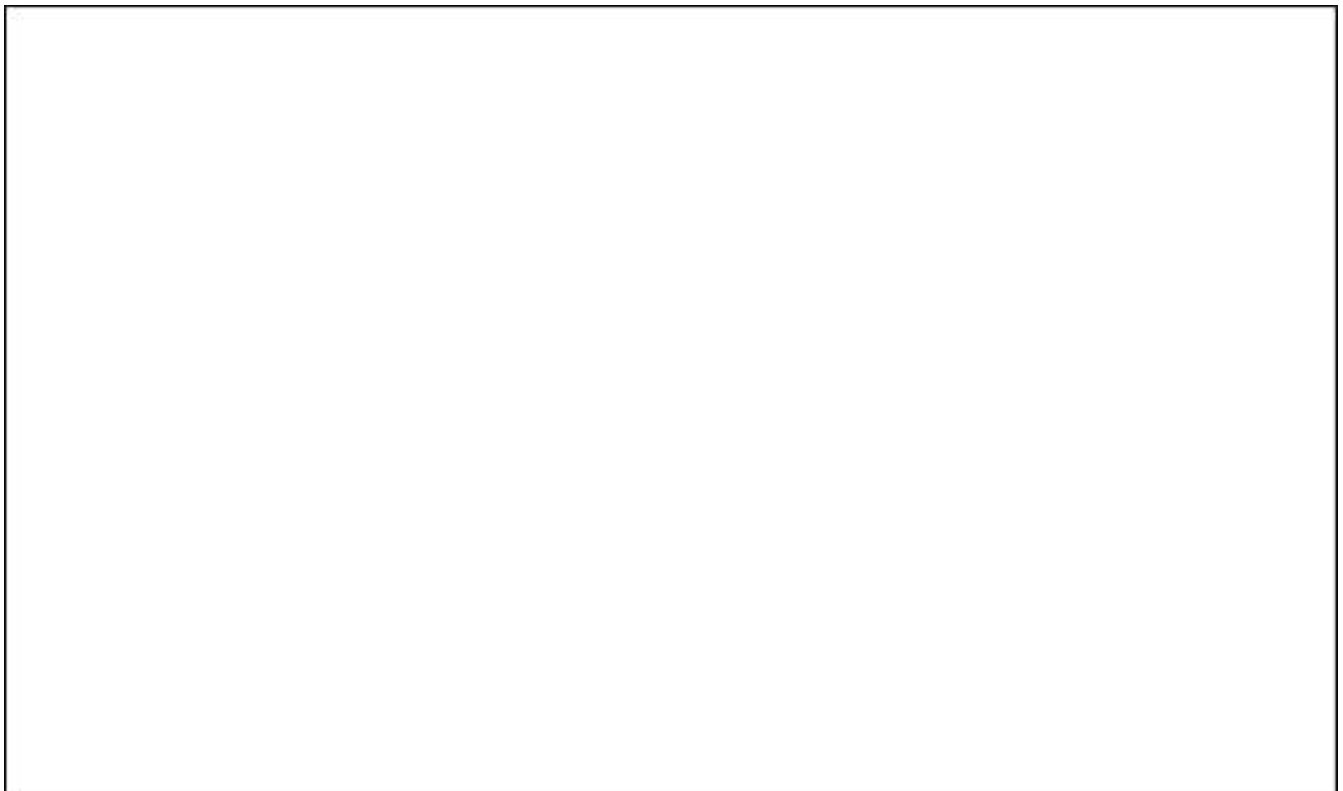
Favorite Ice Cream Flavor	
Ice Cream Flavor	Number of Students
Chocolate	34
Vanilla	27
Chocolate Chip Cookie Dough	38
Rocky Road	14



Pictographs

Make a pictograph to display the data in the table.

Apples sold during 2019	
Month	Number Sold
Winter	17
Spring	12
Summer	40
Fall	55



Probability



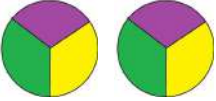

Use the spinner to find the probability of landing on each color.



green	yellow	red	blue

Probability

Make a list of all possible outcomes for each experiment. Then write the total number of outcomes.

<p>toss two coins</p> 	<p>toss a coin and spin the spinner</p> 
<p>spin two spinners</p> 	<p>toss a coin and pick a cube without looking</p> 





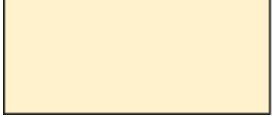

Measurement

Multiply or divide to rename each unit.

$9 \text{ L} = ? \text{ mL}$	$10,000 \text{ mL} = ? \text{ L}$	$50,000 \text{ g} = ? \text{ kg}$	$50 \text{ kg} = ? \text{ g}$
$8 \text{ ft} = ? \text{ in}$	$25 \text{ yd} = ? \text{ ft}$	$21 \text{ ft} = ? \text{ yd}$	$42 \text{ ft} = ? \text{ yd}$
$6 \text{ pt} = ? \text{ qt}$	$22 \text{ gal} = ? \text{ pt}$	$144 \text{ oz} = ? \text{ lb}$	$5,000 \text{ lb} = ? \text{ T}$
$5,000 \text{ T} = ? \text{ lb}$	$72 \text{ L} = ? \text{ mL}$	$12,000 \text{ g} = ? \text{ kg}$	$8,800 \text{ yd} = ? \text{ mi}$

Perimeter and Area of Rectangles

Find the perimeter and area of each rectangle.

<p>13 in</p>  <p>6 in</p>	<p>12 cm</p>  <p>3 cm</p>	<p>4 m</p>  <p>3.2 m</p>
<p>7 m</p>  <p>2 m</p>	<p>5 cm</p>  <p>1.1 cm</p>	<p>6.5 in</p>  <p>2 in</p>



Favorite Sports Logic Puzzle

	Baseball	Tennis	Basketball	Soccer
Alex				
Jessica				
Ryan				
Sophie				

Four friends each have different favorite sports. Use the clues to figure out who likes which sport.

1. Jessica likes neither soccer nor basketball.
 2. Ryan used to like basketball and baseball best, but he has changed his mind.
 3. Neither of the boys likes soccer best.
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