Iron County Schools
4th Grade Math Dictionary

> it means "greater than".

Example: **5 > 3**   (5 is greater than 3)

< it means "less than".

Example: **3 < 5**   (3 is less than 5)
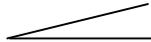
= it means "equal to" or "is the same as"

Example: 5 = 5 (5 equals 5)   2 + 3 = 5   4 + 1 = 3 + 2

≠ it means inequality--where two numbers do not equal each other.

Example: 7 ≠ 5   (7 does not equal 5)

acute angle: any angle that is less than 90°.

Example:
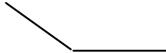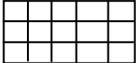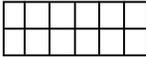
Yes! Less than 90°   No! 90°   No! More than 90°

area: how many squares it takes to cover a shape.

Example: 3   3 x 5 This box has an **area** of 15 squares.

array: This is a 2 x 6 array ⟶

This is a 2 x 6 array done a different way ⟶

associative property: see **properties** page at back.

bar graph:
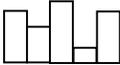
A B C D E

centimeter: a measurement in the **metric system.** It's about as wide as your thumbnail.

Example: One centimeter *⟶ ⊢—⊣

circle:

Example:

cluster: When you get a group of numbers and a lot of them seem to be close to the same.

Example: if you were throwing darts at a number board, and most of the darts hit around the 6, you would say you had a **cluster** of darts around 6.

commutative property: see **properties** page at back.

coordinates: a system we use to show where things are.

Example: This is a set of **coordinates**: (3,5).
The first number (3) is the x number. It tells how many squares you count going left or right.
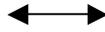
The second number (5) is the **y** number. It says how many squares you count going up or down.

Here's how to remember which thing to do first. When you walk into a hotel, you first walk in a hallway left or right
before you get into an elevator to go up or down.

cup: you know those milk cartons they give you in the lunch room? They hold 1 **cup**.

data: a collection of organized numbers.

degree: means two different things in math language. Its symbol is this: °
First meaning: Temperature. In our customary system, at 32° water freezes. At 212° water boils.
Second meaning: Circles. We take a circle and cut it into 360 parts. Each of those parts is called a **degree**.
So, if you turn all the way around in a circle, you've turned 360°.
if you turn 1/2 way around a circle, you've turned 180°.
if you turn ¼ of the way around, you've turned 90°

denominator: The bottom number of a fraction.

Example: $\dfrac{3}{4}$ ⟵——— *

diameter: the distance all the way across the middle of a circle. Remember, **diameter** begins with **D** and it's **D**ouble the length of the **radius**.

Example:

 * **diameter**
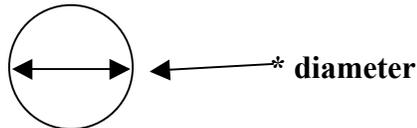
difference: the answer to a subtraction problem.

Example: $\begin{array}{r} 6 \\ -\ 4 \\ \hline 2 \end{array}$ ⟵——— *

distributive property: see **properties** page at back.

dividend: the number that's being divided in a division problem.

Example: 3⟌6 ⟵ ⟶ *

with 2 above the 6.

divisor: the number that does the dividing in a division problem.

Example: * ⟶ 3⟌6

with 2 above the 6.

eighths: 1/8 * ⟶

equation:

  Example: 2 + 4 = 6

equivalent: numbers that have the same value, but look different.

  Example: 1/2 is **equivalent** to 2/4

estimate: sometimes a *close* answer is all you need and is faster. That is when you **estimate**.

  Example: if you're at the store and you have 3 candy bars that are 30¢ each, you **estimate** that you will need about a dollar to pay for it.

expanded form:

  Example: 683 = 600 + 80 + 3

expression: part of an equation. It does not contain an equal sign.
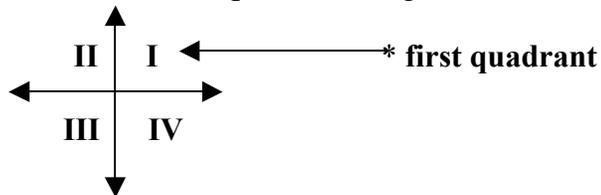
  Examples: 2 + 3   x + y   4(x − y)

factor: the numbers you're multiplying in a multiplication problem.

  Example: 6
           x 3 ⟵ ⟶ * 6 and 3 are **factors** of 18.
           18

first quadrant: when you're putting **coordinates** on a grid, the **first quadrant** is the upper right-hand side. All the numbers in the **first quadrant** are positive.

  Example: II | I ⟵ ⟶ * **first quadrant**
             III | IV

frequency table:

Example:

Tom	llll	4
Pam	JHl l	6
Jim	lll	3
Kim	JHl lll	8

gallon: the big white bottle of milk in your refrigerator has 1 **gallon** of milk in it when it's full.

A gallon holds: 4 **quarts**
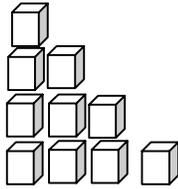
8 **pints**

16 **cups**

gram: is a unit of measuring in the metric system.

Example: a paper clip weighs about 1 gram.

growing pattern:

Example:

inequality: where two numbers do not equal each other. It is shown by this sign: ≠

Example: $7 \neq 5$ (7 does not equal 5)

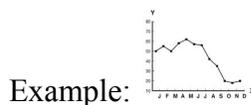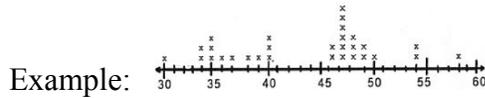**intersecting lines:** where two lines cross.

Examples:
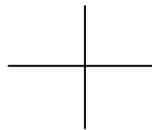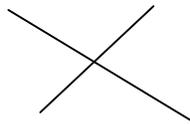
kilogram: a kilogram is used to measure weight in the metric system. It is 1,000 **grams**.

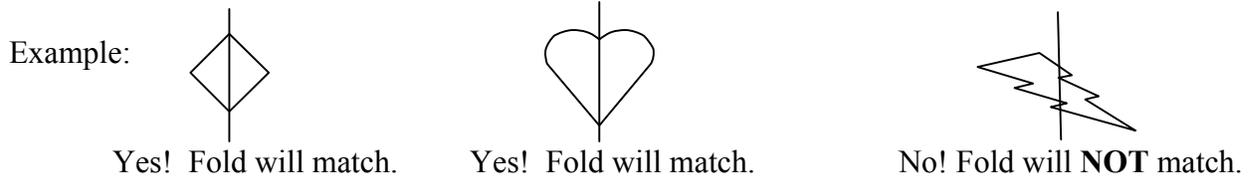Examples: a 1 liter bottle of water weighs 1 kilogram. A 2 liter bottle of soda weighs 2 kilograms.

line graph: a line chart.

Example:

line plot: a way to see if your numbers **cluster**.

Example:

line symmetry: if you fold a shape along a line, both sides will match exactly.

Example:

Yes! Fold will match.   Yes! Fold will match.   No! Fold will **NOT** match.

liter: the main way in the metric system way we say how much something will hold.
  Example: if your two **liter** soda bottle is only half full, because your naughty cousin drank it, you
      have 1 **liter.**

meter: the main measuring unit in the **metric system.** It's about 3 inches longer than a yardstick.

  Example: 100 of these **centimeters** stuck together make one meter.   *   1 **centimeter**

milliliter: 1/1000 of a liter. (don't mix it up with milli**meter!)**

  Example: If you have a teardrop coming out of each eye, if you put them together that is about a
      milliliter.
millimeter: 1/1000 of a meter. (don't mix it up with milli**liter!)**

  Example: a paper clip is about 1 millimeter thick.

multiple: the numbers you get when you skip count.

  Examples: **multiples** of 2:   2   4   6   8   10   12…and so on forever!
        multiples of 7:   7   14   21   28   35…and so on forever!
        multiples of 20:   20   40   60   80   100 120…and so on forever!

numerator: the top number in a fraction.
              5 ←——— *
  Example: 8

obtuse angle: an angle that is more than 90°

  Example:
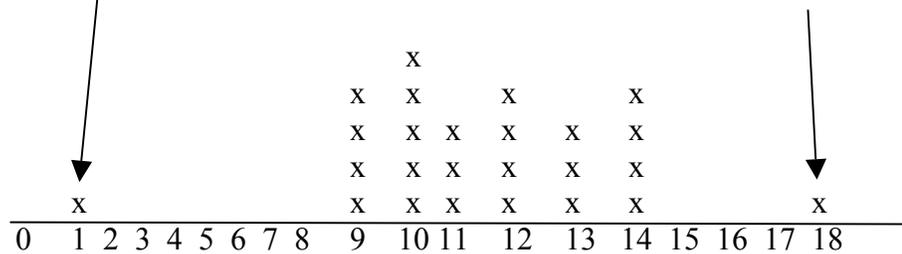   Yes! More than 90°   No! 90°   No! Less than 90°

order of operations: solve your equations in this order:
  Parentheses
  Exponents
  Multiplication
 **D**ivision
  Addition
  Subtraction

  That makes the initials **PEMDAS**. A way to remember that is:
  Please **E**xcuse **M**y **D**ear **A**unt **S**ally

outliers: (out'-lye-erz) when you put all your numbers on a **line plot**, if there are some that are *far* away from the others, you call them **outliers**.

Example: **outlier**   **outlier**

```
                       x
            x   x        x         x
            x  x x   x    x    x
            x  x x   x    x    x
    x       x  x x   x    x    x         x
   ─────────────────────────────────────────
   0  1 2 3 4 5 6 7 8  9 10 11  12  13 14 15 16 17 18
```

parallel lines: two straight lines that go side by side and never touch. The two "L's" in parallel are parallel!
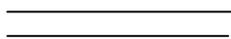
  Example: ══════════════ ←———— *these lines are **parallel** and these lines are **parallel** *

parentheses: when you see these in an equation, do what's inside them first.

  Example: (2 + 3) x 10 ÷ 2 = 25 without the parentheses, this is what the answer would be:
       2 + 3 x 10 ÷ 2 = 17 (see **order of operations**.)

perimeter: how far it is around a shape. (how far you'd have to walk if you walked all the way around the shape.)   4ft.

  Example: The **perimeter** around this square is 16 feet.   4ft. ⬜ 4 ft.
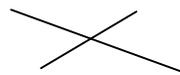   4 ft.
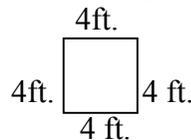
perpendicular lines: two lines that meet or cross and make a 90° angle.

  Example: ┼   ╳

         Yes! 90°--**perpendicular**.   No! not 90°--NOT **perpendicular.**

pint: half of a **quart** and 1/8 of a **gallon**. There are 2 **cups** in 1 **pint**.

   Example: If the lunch lady gives you 1 carton of white milk and 1 carton of chocolate milk,
    you are very lucky. You now have 1 **pint** of milk.

probability: the chance that something is going to happen.

   Example: You have 10 socks in your drawer and 8 of them are pink and 2 of them are blue.
            When you reach in and grab out 2 with your eyes closed, there's a good **probability** you
            will get pink socks and not blue socks.

product: the answer in a multiplication problem.

                        6
   Example: x 3   ——* **product**
                       18

quart: there are 4 **quarts** in 1 **gallon**. A **quart** is 1 **quart**er of a gallon. There are 2 **pints** in 1 **quart.**
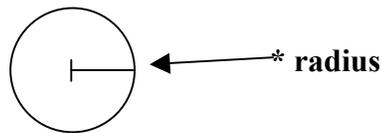   there are 4 **cups** in one quart.

        Example: If you have a box of ice cream that is half gone because your pet monkey ate it
            while you were pulling weeds, you have a very naughty monkey. You also have 1 **quart** of
            ice cream left.

quotient: the answer to a division problem.
                    3 ◄——*
   Example: 2)6

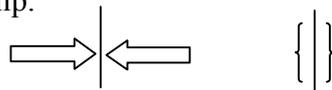**radius:** the distance halfway across the middle of a circle. (see **diameter**)

   Example:

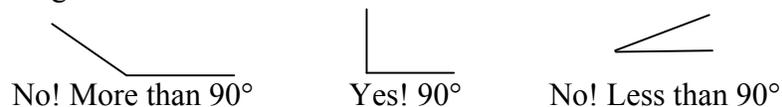   * **radius**
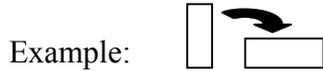
reflect: is the same as a flip.

   Examples:

right angle: a 90° angle.

   Example:
   No! More than 90°   Yes! 90°   No! Less than 90°

rotate: is the same as a spin.

Example:

rotational symmetry: if you put a nail in a shape and spin it, rotational symmetry says how many
   times it can be fitted on itself besides the starting spot.

   Example: If you put an **X** at the top of a paper, then nailed the paper to a board with the X at the
      top, when you rotated the paper until the X was at the bottom you would have **rotational
      symmetry**.

before spin   the spin!   after spin

X
.

.
X

sixths: $\frac{1}{6}$ *→
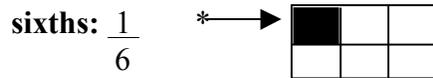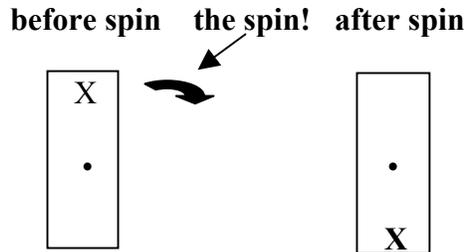
square number: numbers that if you laid them out as dots, you could make a square.

Examples: 4   9   16   7

No! not square.

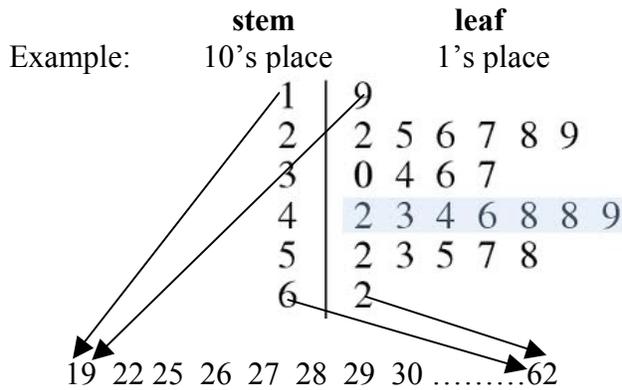The first 10 **square numbers** are these: 1 4 9 16 25   36   49   64 and 81. They are made by
multiplying a number by itself.

Examples: 2 x 2 = **4**   3 x 3 = **9**   4 x 4 = **16**

standard form: the regular way we write numbers.

Examples:	**Expanded form**:	**Standard form**:
	40 + 9	49
	800 + 20 + 3	823
	1,000 + 600 + 80 + 7	1,687

stem and leaf plot: an easy way to write a lot of numbers.

Example:

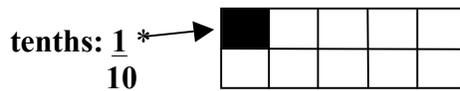|	**stem** 10's place	**leaf** 1's place
1	9
2	2 5 6 7 8 9
3	0 4 6 7
4	2 3 4 6 8 8 9
5	2 3 5 7 8
6	2

19 22 25 26 27 28 29 30 62

In this example, you stick the stem together with each leaf on the right.

straight angle: an angle that measures 180°. It makes a straight line.

Example: ——————————

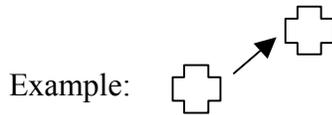**sum:** the answer to an addition problem.

Example:
$$\begin{array}{r} 6 \\ +\ 4 \\ \hline 2 \end{array} \longleftarrow *$$

tenths: $\underline{1}$ *→
        $\overline{10}$

transformation: the following are transformations:

rotation (spin), **translation** (slide), **reflection** (flip)

translate: same as **slide**. You **slide** the object from one place to another.

Example:

zero property of multiplication: see **properties** page at back.

Properties:

associative property: says that when you add or multiply numbers it doesn't matter how you group them.

    Example: in addition: $(3 + 5) + 2 = 3 + (5 + 2)$

        In multiplication $(3 \times 5) \times 2 = 3 \times (5 \times 2)$

commutative property: says that when you add or multiply numbers it doesn't matter in which order you do them.
That is not true when you subtract or divide!
Remember, when you **commu**nicate with your friend, you both talk back and forth.
You talk, your friend talks. Your friend talks, you talk. It works either way!

    Example: In addition: $2 + 6 = 6 + 2$

        In multiplication: $2 \times 6 = 6 \times 2$

distributive property: says that you multiply each number *inside* the parentheses by the number that's *outside* the parentheses.
  Example: $2(1 + 7)$ is the same as $2 \times 1 + 2 \times 7$ which equals 16.
        $3(4 + 5)$ is the same as $3 \times 4 + 3 \times 5$ which equals 27.

identity property: for addition: $6 + 0 = 6$ (when you ***add*** something to 0 it stays the same!)
              for multiplication: $6 \times 1 = 6$ (when you ***multiply*** something by 1 it stays the same!)

zero property: The **zero property** of multiplication says that when you multiply *any number* by 0, the answer is **always** 0!

  Example:
$$0 \times 0 = 0$$
$$3 \times 0 = 0$$
$$5 \times 0 = 0$$
$$1{,}256 \times 0 = 0$$
$$876{,}321{,}568{,}154{,}298{,}356{,}147{,}369{,}254\,{,}756{,}154{,}986{,}147{,}455{,}026{,}858 \times 0 = 0\ !$$