Eighth Grade

Common Core Mathematics

Terminology

Please go to Mr. Reinhardt's SBCS Webpage

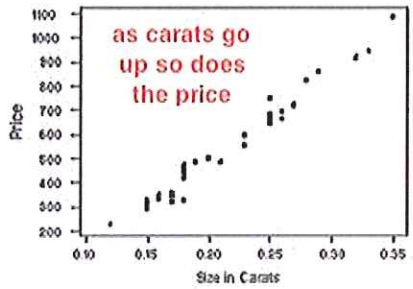
for more vocabulary resources.

www.southbuffalocs.org/Page/624

Quizlet — Common Core 8th Grade Math Vocabulary

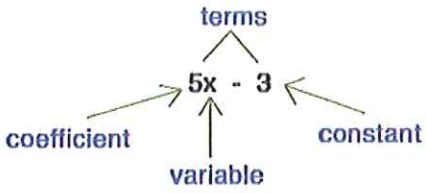
Study online at quizlet.com/_ej6pq

1. **bivariate measurement:**



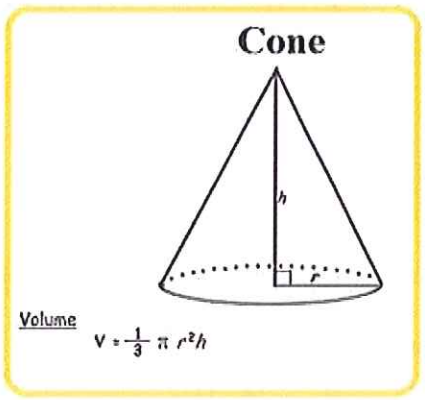
involves the analysis of two variables for the purpose of determining a relationship

2. **coefficient:**



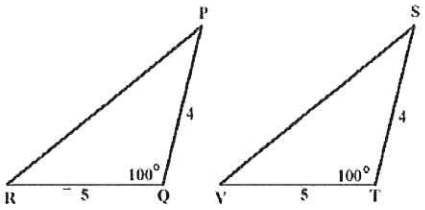
the number that is multiplied by (in front of) the variable in an algebraic expression

3. **cone volume:**



the number of cubic units needed to fill a cone

4. **congruent:**



having the same size and shape

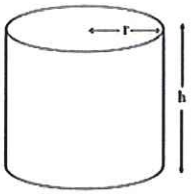
5. **cubed root:**

$$\sqrt[3]{8} = 2$$

one of three equal factors (multiplication) of a number - it is the side of a cube

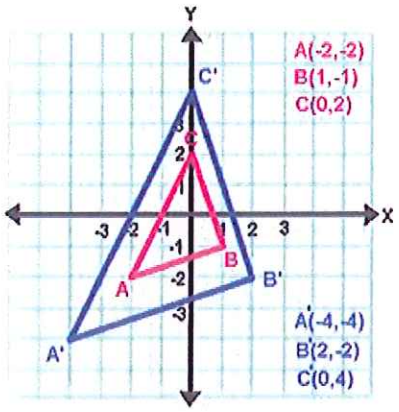
6. **cylinder volume:**

$$V = \pi r^2 h$$



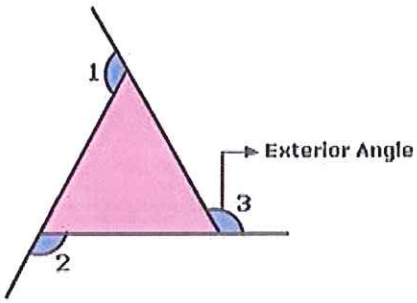
the number of cubic units needed to fill a cylinder

7. **dilation:**



a transformation created proportionally by enlarging or reducing a figure

8. **exterior angles:**



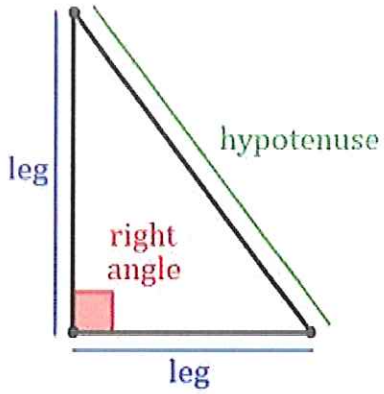
an angle formed outside a polygon by extending one of its sides

9. **function (equation or rule):**

x	y	y = 2x + 3
4	11	y = 2(4) + 3 = 11
-2	-1	y = 2(-2) + 3 = -1
0	3	y = 2(0) + 3 = 3
2	7	y = 2(2) + 3 = 7

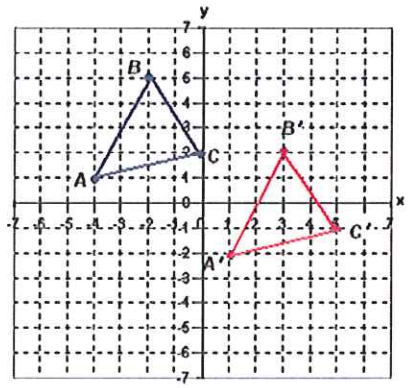
an input-output relationship that has exactly one output (y-value) for each input (x-value)

10. **hypotenuse:**



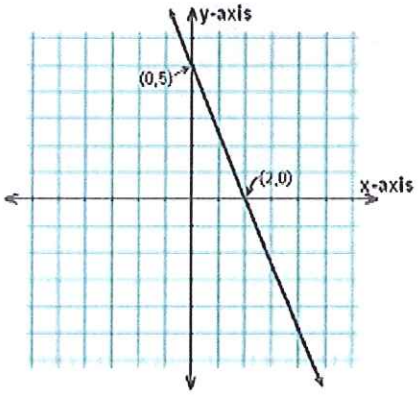
the side opposite the right angle - it is also the longest side of a right triangle

11. **image:**



a figure resulting from a transformation

12. **intercepts:**



points where a line crosses the x-axis and y-axis

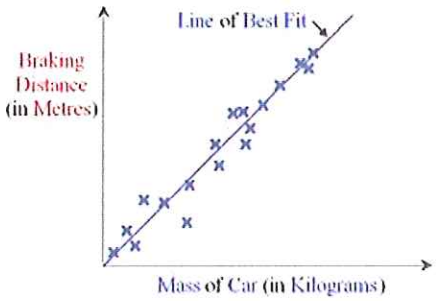
13. **irrational number:**

$$\textit{irrational number} \Rightarrow \sqrt{19} \approx 4.35889...$$

$$\textit{rational number} \Rightarrow 0.5 = \frac{1}{2}$$

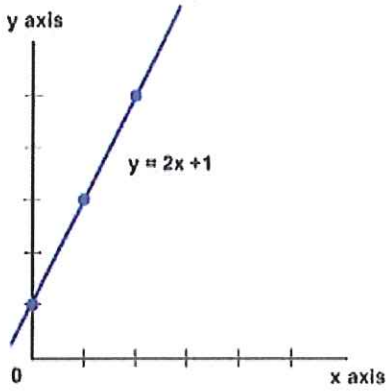
a number that can NOT be expressed as a ratio of two integers or as a repeating or terminating decimal - Pi or any square root of an imperfect square are considered irrational

14. **line of best fit:**



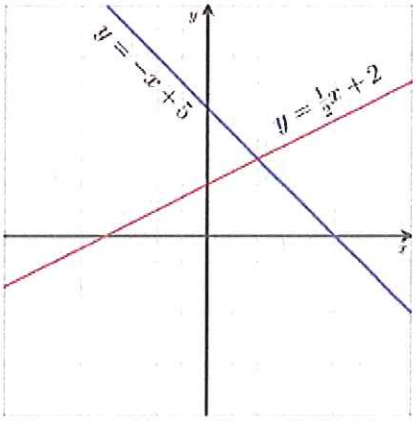
a straight line that comes closest to the points on a scatter plot - having an equal number of points above and below the line

15. **linear equation:**



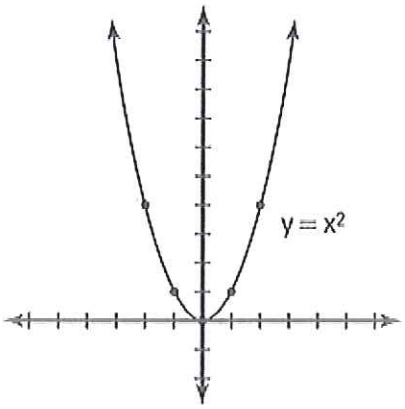
an equation that makes a straight line when it is graphed - also called a linear function

16. **linear function:**



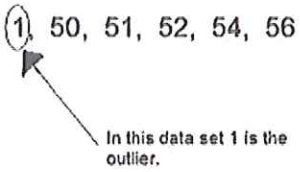
a function (equation) whose graph is a straight line

17. **non-linear function:**



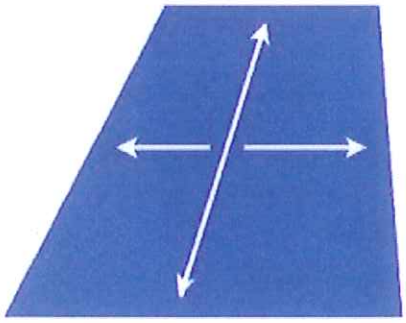
a function (equation) whose graph is NOT a straight line

18. **outlier:**



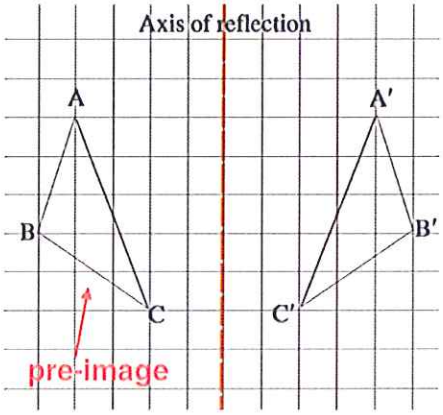
a value much greater or much less than the others in a set of data - any data point 1.5 times the interquartile range away from the 1st quartile (lower quartile) or 3rd quartile (upper quartile)

19. **plane:**



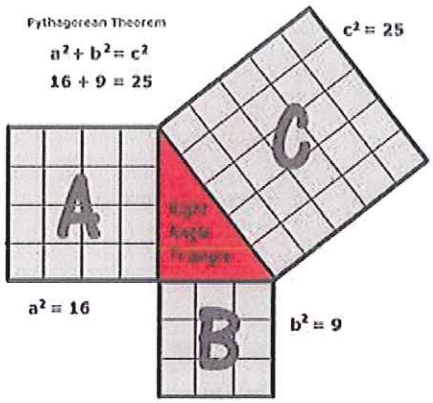
a flat, 2D surface that goes in all directions forever

20. **pre-image:**



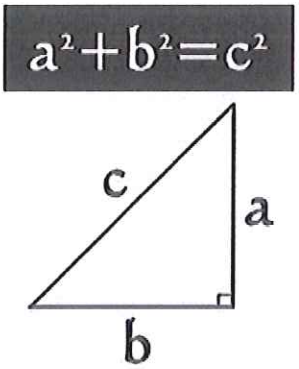
the original image before transformation

21. **proof:**



a convincing demonstration that a mathematical statement is true

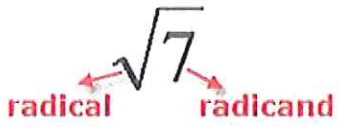
22. **Pythagorean Theorem:**



in a right triangle the square of the length of the hypotenuse is equal to the sum of the squares of the lengths of the legs

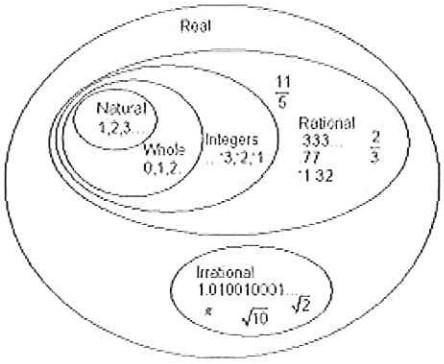
$A^2+B^2=C^2$

23. **radical symbol:**



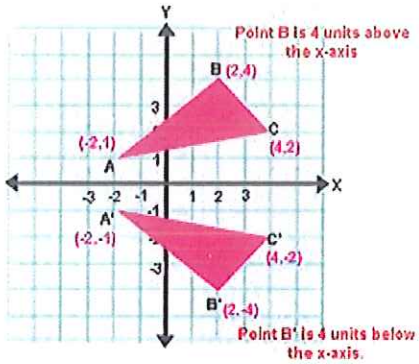
the symbol used to represent the non-negative square root of a number

24. **rational number:**



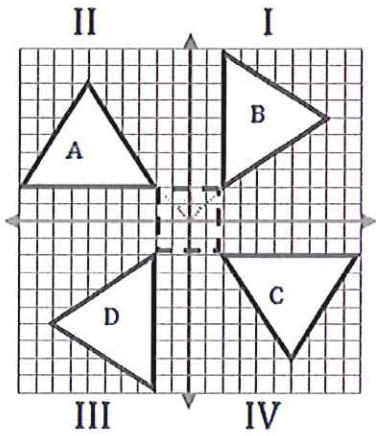
a number that can be expressed as a ratio (fraction) of two integers - terminating and repeating decimals are considered rational

25. **reflection:**



a transformation created by reflecting (flipping) an image over a line

26. **rotation:**



a transformation made by rotating (turning or spinning) a figure around a given point

27. **scatter plot:**

a graph with points plotted to show a possible relationship between two sets of data

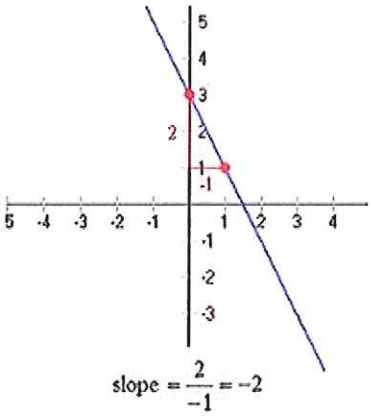
28. **scientific notation:**

$72{,}000{,}000 = 7.2 \times 10^7$

scientific notation

a method of writing very large (34,200,000) or very small (0.0000029) numbers using powers of 10

29. **slope:**



a measure of the steepness of a line on a graph - m - rise over run - pattern of the y-outputs

30. **slope-intercept form:**

$y = mx + b$

slope y-intercept

$y = 2x + 3$

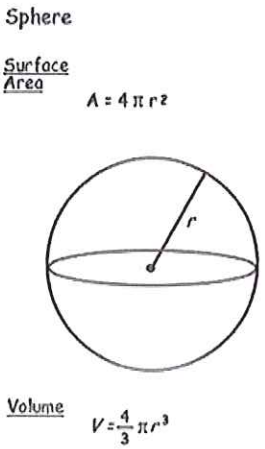
slope y-intercept

2/1 is the slope

(0,3) is the y intercept

a linear equation written in the form y = mx + b, where m represents slope and b represent the y-intercept

31. **sphere volume:**



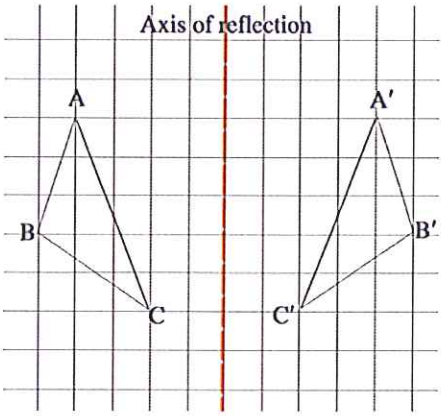
the number of cubic units needed to fill a sphere

32. **square root:**

$\sqrt{1} = 1$ since $1^2 = 1$
$\sqrt{4} = 2$ since $2^2 = 4$
$\sqrt{9} = 3$ since $3^2 = 9$
$\sqrt{16} = 4$ since $4^2 = 16$
$\sqrt{25} = 5$ since $5^2 = 25$
$\sqrt{36} = 6$ since $6^2 = 36$
$\sqrt{49} = 7$ since $7^2 = 49$
$\sqrt{64} = 8$ since $8^2 = 64$
$\sqrt{81} = 9$ since $9^2 = 81$
$\sqrt{100} = 10$ since $10^2 = 100$

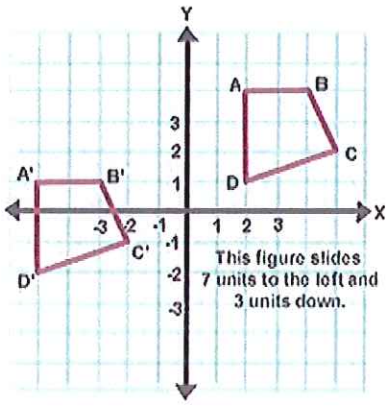
one of two equal factors (multiplication) of a number - it is the side of a square

33. **transformation:**



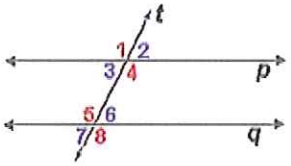
moving a shape so that it is in a different position, but still has the same size, area, angles and line lengths

34. **translation:**



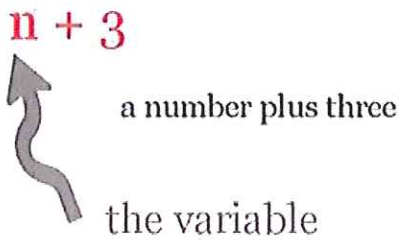
a transformation created by sliding an object

35. **transversal:**



a line that intersects (crosses) two or more lines in a given plane

36. **variable:**



a symbol for an unknown number - usually expressed as a letter