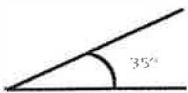# *KYSU STANDARDS for MATHEMATICS*

Level 4 Student Glossary
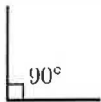
angles *two rays that share the same endpoint form an angle.*

Types of angles include:
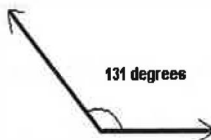
acute **angle** *an angle measuring between 0 and 90 degrees*

35°

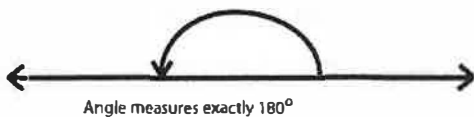**right** **angle** *an angle measuring 90 degrees*

90°

obtuse **angle** *an angle measuring between 90 and 180 degrees*
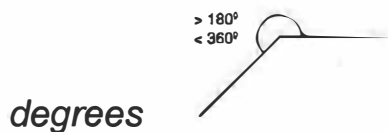
131 degrees

straight **angle** *an angle measuring 180 degrees*

Straight Line

Angle measures exactly 180°

reflex **angle** *an angle measuring more than 180 but less than 360*

> 180°
< 360°

degrees

complementary angles *two angles for which the sum of their measures is 90°*

supplementary angles *two angles for which the sum of their measures is 180°*

adjacent angles *angles that have a common side and a common vertex*

area *the amount of space inside the boundary of a 2-dimensional figure, expressed in square units*

Associative Property *a mathematical rule stating that when more than two numbers are added or multiplied, the result will be the same no matter how the numbers are grouped*

base *the whole amount in a percentage problem; a number raised to a power, such as 5 in 5^2*

chord *a straight line connecting two points on a circle*

circle *a plane figure (2-D) formed by a curved line such that each point on the curve is the same distance from a fixed point, called the center*

circumference *the distance around the edge of a circle*

Commutative Property *a mathematical rule stating that the order in which numbers are added or multiplied does not change the sum or product*

coefficient *the number part of the terms with variables, e.g. in 4x, the coefficient is 4*

composite number *a positive number that can be divided evenly by numbers other than 1 or itself*

coordinate grid *a set of points formed by a grid with a horizontal (x-) and a vertical (y-) axis*

cube *a number multiplied by itself 3 times shown by the exponent ^{3} as in 5^3; also a 6-sided 3-D figure in which each side is the same-sized square*

cylinder *a 3-dimensional figure with 2 congruent circular bases and straight sides, such as a tube*

data *information (often numerical) that is collected and analyzed*

decimal *numbers based on a whole being split into ten equal parts one or more times*

denominator *the bottom number of a fraction*

diameter *a straight line running from one side of a circle through the center to the other side*

Distributive Property of Multiplication *a mathematical rule over addition and subtraction that says the following is true for all numbers a, b, and c: a(b + c) = ab + ac or a(b − c) = ab − ac*

equation *a number sentence using math symbols to say that two things are the same*

equivalent fractions *fractions that are equal to each other (2/3 = 4/6)*

exponent *a small raised number at the right of a base number (3 in 4^3) that tells how many times the base number is multiplied by itself (4 x 4 x 4)*

expression *a mathematical statement that may use numbers, variables, or both but does not have an equals sign*

factors *numbers or algebraic expressions that are multiplied together (e.g., 3 and 4 are factors of 12; 2 and x are factors of 2x)*

formula *mathematical rule that uses symbols, numbers or letters to stand for specific kinds of quantities, often in the form of an equation*

fraction *a part of a whole, written using a fraction bar ($\frac{2}{3}$)*

graph *see appendix*

greatest common factor (GCF) *the largest factor that 2 or more numbers have in common*

horizontal ⟷ *parallel to the horizon; flat and level*

improper fractions *fractions with a value equal to or greater than one: fractions in which the numerator is equal to or greater than the denominator, e.g.* $\frac{11}{5}$

in-out table *a data table in which input and output are determined according to a rule*

integer *any positive or negative whole number or zero*

inverse operation *the opposite operation, e.g. addition and subtraction are inverse operations*

latitude *imaginary circles around the Earth running parallel to the equator*

line *a collection of points along a straight path that goes on and on in opposite directions; a line has no endpoints. Two lines may relate to each other as **parallel** where the lines are always the same distance apart so never meet, ‖ ; they may be*

perpendicular *to each other where they stand at right angles to each other,* $\perp$ *; they may be **intersecting** where they simply cross over one another*

longitude *imaginary circles around the Earth running through the North and South Poles*

mathematical symbols *signs used to indicate a mathematical relation or operation, e.g.* **+, -, x, ÷, ,√ , −, =, ≠, %,>, <, √ ,², ³ ≈,≥, ≤, π**

mean *the average of a set of numbers, obtained by dividing the sum of the set by the number of numbers in the set*

measurement systems:

> **customary** *the system commonly used in the United States; e.g. feet, miles, pounds, and ounces*
>
> **metric** *the system used throughout most of the world that is based on the powers of ten (common units are meters, grams, liters, etc.)*

median *the middle number of a set of numbers arranged in order*

mixed number *an amount written as a whole number and a fraction (7¾)*

mode *in a list of data, the number occurring most often*

multiple *the result of multiplying a given number by the counting numbers (0, 1, 2, 3, and so on)*

negative integer *a number that is less than zero*

numerator *the top number of a fraction*

order of operations *PEMDAS*

  P: *Parentheses. Perform all operations within parentheses first*

  E: *Exponents. Evaluate exponents*

  M/D: *Multiply/Divide, working from left to right*

  A/S: *Add/Subtract, working from left to right*

ordered pair *a pair of numbers that names a point on a coordinate grid; presented in parentheses as (the x-coordinate, the y-coordinate)*

partial amount *the part in a percentage problem*

pattern *an arrangement of numbers, shapes or terms formed by following a particular rule*

percent *a way of representing part of a whole equal to 100; means "for every 100" or "out of 100", represented by the symbol %*

perfect square *a number that is equal to the square of another number*

perimeter *the distance around a flat (2-D) figure*

perpendicular *standing at right angles to a line or a plane*

pi *approximately 3.14; pi is the constant ratio of the circumference of a circle to the diameter, represented by the symbol π*

point *a single, exact location often represented by a dot:* ●

point of origin *the point at which the x-axis and y-axis in a coordinate grid intersect; the point represented by the ordered pair (0,0)*

polygons *plane figures (2-dimensional) with 3 or more sides.* **Polygons** *include:* **triangles** (3 sides)
 quadrilaterals (4 sides)
 pentagon (5 sides)
 hexagon (6 sides)
 heptagon (7 sides)
 octagon (8 sides)
 nonagon (9 sides)
 decagon (10 sides)

positive integer *a number that is greater than zero*

power *(exponent) the number of times a quantity is to be multiplied by itself, usually written as a small number to the right and above the quantity or base*
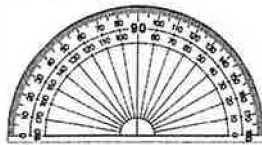
prime number *positive integer that can only be divided evenly by 1 or itself*

probability *the chance of something happening*

proportion *an equation that compares two equal ratios or fractions, e.g.   2/3 = 8/12*

protractor *a tool used to measure the number of degrees in an*

angle

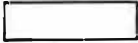**quadrant** *one-fourth of a coordinate grid, formed by the intersecting axes*

quadrilateral *any 2-dimensional figure with 4 sides*
   Examples of **quadrilaterals** *include:*
      parallelogram
      rectangle
      rhombus
      square
      trapezoid

radius *a line segment extending from the center of a circle to its edge*

range *the difference between the lowest number and the highest number in the set*

rate *a ratio expressing percent; any number over 100 (75/100) shows percent (75%)*

ratio *a comparison of two like quantities (amounts expressed in the same units), e.g., 1:3, 1 to 3, 1/3*

rectangular solids *three-dimensional figures in which all sides are rectangles and all corners are square, e.g.*

simplest form *term used to describe a fraction in which there is no number other than 1 that will divide evenly into both the numerator and the denominator*

square root $\sqrt{}$ *a number that when multiplied by itself gives the original number ($\sqrt{9}$ = 3 because 3 x 3 = 9)*

squaring *multiplying a number by itself, usually shown as the number and the exponent ^{2} (3^2)*

substitution *the act of replacing a letter in an equation or formula with its value*

table *see appendix*

term *in algebra, a number, variable or the product of a number and variables*

three dimensional *having height, width, and depth*

> *Common 3-D figures include: cubes, cylinders, cones, pyramids, rectangular solids*

transformation *in geometry, the change of the position of a shape on a coordinate plane, moving it from one place to another either by* **reflection** *(flipping it),* **translation** *(sliding it) or* **rotation** *(turning it).*

triangles *2-dimensional figures having 3 sides and 3 angles. Types include:*

> **acute triangle** *all 3 of its angles are acute*
> **obtuse triangle** *has 1 obtuse angle*
> **right triangle** *has 1 right angle*

two-dimensional *having length and width, but no thickness*

Common 2-D figures include: squares, rectangles, triangles, circles, parallelograms, polygons, trapezoids

variable *a letter used to represent an unknown amount*

vertex *the point of an angle where two rays (sides) intersect*

vertical *straight up and down*

volume *the amount of space taken up or enclosed by a three-dimensional object, expressed in cubic units*

x-axis *the horizontal axis on a coordinate grid*

x-coordinate *the first number in an ordered pair, the distance from the origin along the x-axis*

y-axis *the vertical axis on a coordinate grid*

y-coordinate *the second number in an ordered pair, the distance from the origin along the y-axis*

APPENDIX

TABLE

table *a display of data organized in rows and columns*

Styled dataTable Component

In this example the dataTable is styled with custom CSS

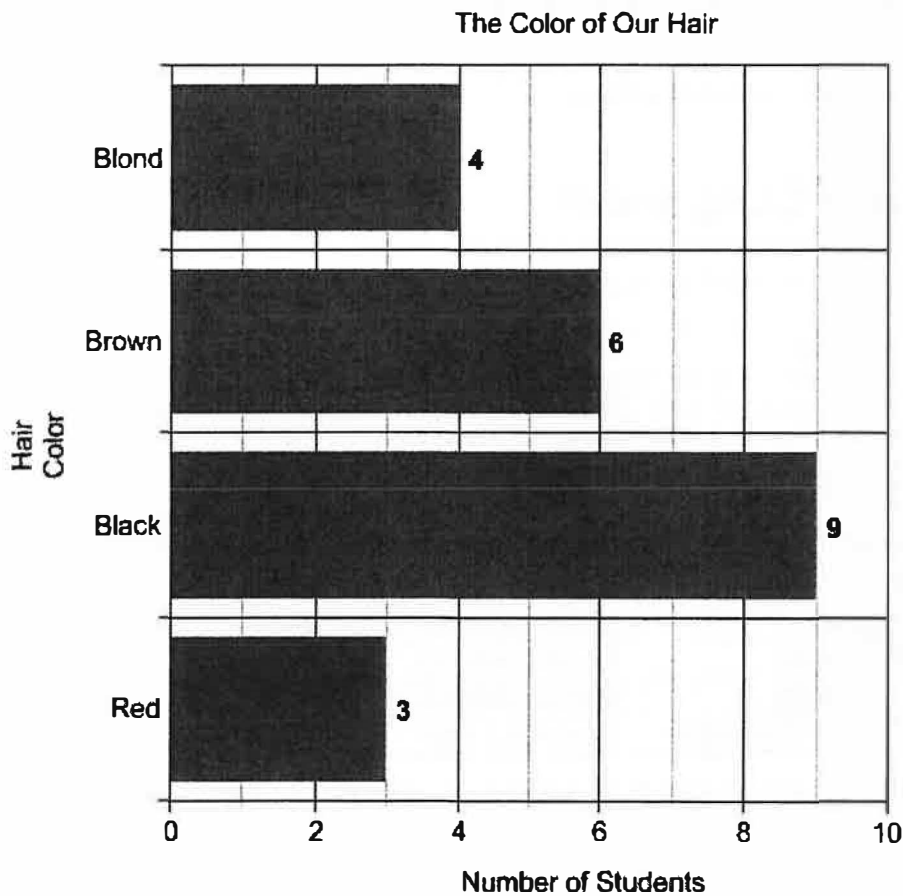| Stock #	Model	Description	Odometer	Price↑
57605	Dodge SX 2.0	Loaded/Keyless	28000	14495
58205	Dodge SX 2.0	Loaded/Keyless	19500	15495
57805	Chrysler Sebring Touring	Keyless/Trac Cont	31500	15995
58465	Chrysler Sebring Touring	Keyless/Trac Cont	32500	15995
58455	Chrysler Sebring Touring	Keyless/Trac Cont	34000	16695
58495	Chrysler Sebring Touring	Keyless/Trac Cont	22500	16695
58375	Chrysler PT Cruiser	Cruise/KeylessD	29500	17795
58475	Dodge Grand Caravan	Quads/Rear AC	52000	19895
58285	Dodge Grand Caravan	Sto&Go/Keyless	43500	21695
57965	Chrysler PT Cruiser Convertible	Touring/Loaded	7000	22195

20 cars found. displaying 10 car(s). from 1 to 10. Page 1 / 2. |< << < **1** 2 > >> >|
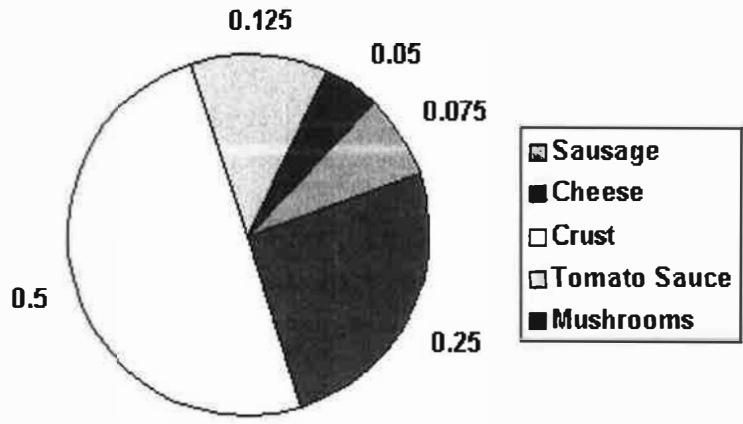
Done

GRAPHS

graphs *diagrams showing the relationship of quantities, e.g. bar graphs, line graphs, circle or pie graphs:*

<u>bar graph</u> *graph that displays data using horizontal or vertical bars to compare numbers*

The Color of Our Hair

Number of Students

circle graph *graphs that show a whole amount (100%) divided into parts*

0.125

0.05

0.075

| ▣ Sausage |
| ■ Cheese |
| ▢ Crust |
| ▢ Tomato Sauce |
| ■ Mushrooms |

0.5

0.25

line graph *graph that uses a line to show changes over time*

Temperature
(°C)

Temperature at midday
over 7 days in July

28

27

26

25

24

23

22

21

20

19

18

Su   Mo   Tu   We   Th   Fr   Sa
Days of the week