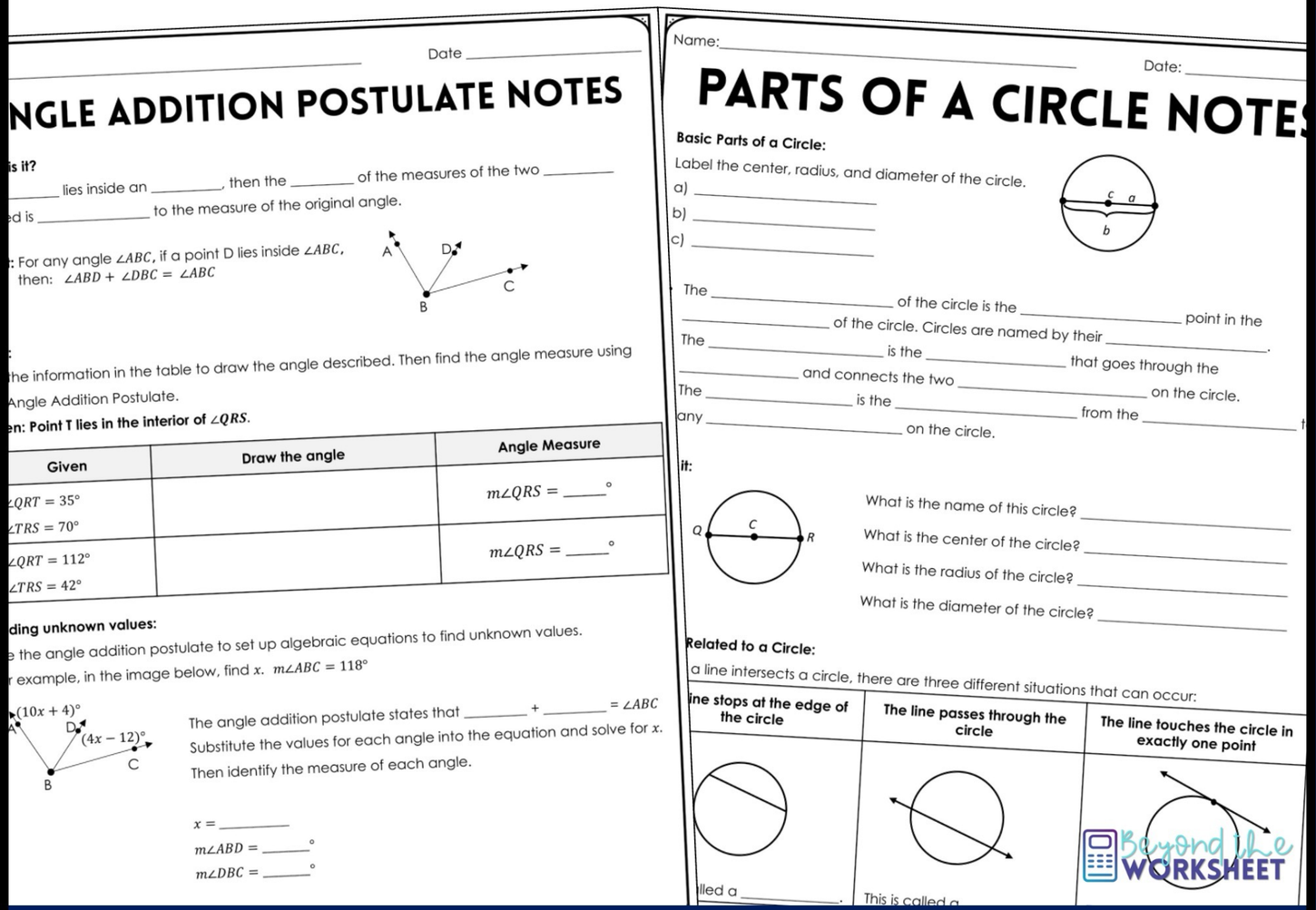
HIGH SCHOOL GEOMETRY

GUIDED NOTES



Date _____

NGLE ADDITION POSTULATE NOTES

is it?

_____ lies inside an _____, then the _____ of the measures of the two _____ ed is _____ to the measure of the original angle.

: For any angle $\angle ABC$, if a point D lies inside $\angle ABC$, then: $\angle ABD + \angle DBC = \angle ABC$

A D C B

he information in the table to draw the angle described. Then find the angle measure using Angle Addition Postulate.

en: Point T lies in the interior of $\angle QRS$.

Given	Draw the angle	Angle Measure
$\angle QRT = 35°$ $\angle TRS = 70°$		$m\angle QRS =$ _____°
$\angle QRT = 112°$ $\angle TRS = 42°$		$m\angle QRS =$ _____°

ding unknown values:

e the angle addition postulate to set up algebraic equations to find unknown values.

r example, in the image below, find x. $m\angle ABC = 118°$

$(10x + 4)°$ A D $(4x - 12)°$ C B

The angle addition postulate states that _____ + _____ = $\angle ABC$

Substitute the values for each angle into the equation and solve for x.

Then identify the measure of each angle.

$x =$ _____

$m\angle ABD =$ _____°

$m\angle DBC =$ _____°

Name: _____ Date: _____

PARTS OF A CIRCLE NOTES

Basic Parts of a Circle:

Label the center, radius, and diameter of the circle.

a) _____

b) _____

c) _____

c a b

The _____ of the circle is the _____ point in the _____ of the circle. Circles are named by their _____.

The _____ is the _____ that goes through the _____ and connects the two _____ on the circle.

The _____ is the _____ from the _____ any _____ on the circle.

it:

Q C R

What is the name of this circle? _____

What is the center of the circle? _____

What is the radius of the circle? _____

What is the diameter of the circle? _____

Related to a Circle:

a line intersects a circle, there are three different situations that can occur:

ine stops at the edge of the circle	The line passes through the circle	The line touches the circle in exactly one point
lled a _____.	This is called a	

Beyond the WORKSHEET

A FULL YEAR OF SCAFFOLDED NOTES

Enhance your high school Geometry instruction with this complete set of **guided notes**! This resource includes detailed, easy-to-follow notes that cover all high school Geometry standards.

learn more!

INTRO TO GEOMETRY

- Points, Lines and Planes
- Measuring Segments
- Midpoint
- The Distance Formula
- Partitioning a Segment
- Measuring Angles
- Angle Addition Postulate
- Exploring Angle Pairs
- Geometric Constructions

Date _____

INTS, LINES AND PLANES NOTES

rms:

t: _____

e: _____

e Segment: _____

y: _____

ane: _____

ollinear: _____

oplanar: _____

ming Points, Lines and Planes:

nts are named with a _____. *Example:* • A = _____

or a script _____ letter.

Name _____ Date _____

PARTITIONING A SEGMENT NOTES

ecall:

A line segment is a _____ of a line bound by _____ distinct endpoints.

It includes all the points _____ these endpoints.

rtitioning a Segment:

To partition a segment means to _____ it into _____ segments or sections.

Equal partitioning is _____ a segment into smaller segments of _____ length.

Ratio partitioning is _____ a segment into parts that are _____ to a given ratio.

Fractional partitioning is _____ a segment based on fractional _____ of the whole segment.

mples:

al partitioning:

en a line segment $\overline{AB}$ with a length of 12 units, partition it into 4 equal parts.

ecause we want _____ equal parts, we divide _____ by _____ so each part will be _____ units long.

partitioning:

n a line segment $\overline{AB}$ with a length of 30 units, find a point, P, that divides it into two segments, that $\overline{AP}$ to $\overline{PB}$ is the ratio 1:2

Date _____

ETRIC CONSTRUCTIONS NOTES

nstruction is the process of creating geometric shapes, figures, or configurations npass and a straightedge.

egment: When given a line segment, use these steps to copy that line segment v one.

A B

e to place the new line segment and ne segment.

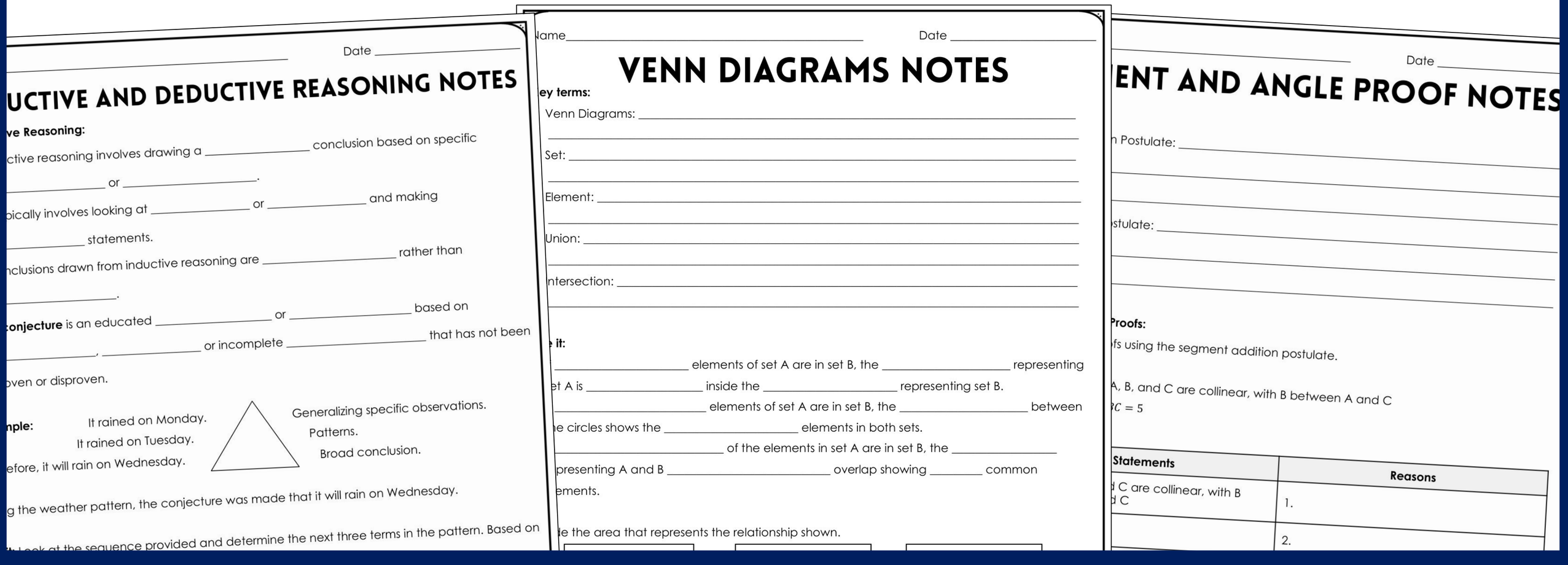
_____ on the line.

X

ss pivot point on one end of the given Adjust the compass so that the other her point.

REASONING AND PROOFS

- Inductive and Deductive Reasoning
- Compound Statements
- Conditional Statements
- Venn Diagrams
- Algebraic Proofs
- Proving Theorems
- Segment and Angle Proofs



Date _____

UCTIVE AND DEDUCTIVE REASONING NOTES

ve Reasoning:

ctive reasoning involves drawing a _____ conclusion based on specific

_____ or _____.

ically involves looking at _____ or _____ and making

_____ statements.

nclusions drawn from inductive reasoning are _____ rather than

_____.

onjecture is an educated _____ or _____ based on

_____, _____ or incomplete _____ that has not been

oven or disproven.

mple: It rained on Monday.
It rained on Tuesday.
efore, it will rain on Wednesday.

Generalizing specific observations.
Patterns.
Broad conclusion.

g the weather pattern, the conjecture was made that it will rain on Wednesday.

Look at the sequence provided and determine the next three terms in the pattern. Based on

Name_____ Date _____

VENN DIAGRAMS NOTES

ey terms:

Venn Diagrams: _____

Set: _____

Element: _____

Union: _____

ntersection: _____

it:

_____ elements of set A are in set B, the _____ representing

et A is _____ inside the _____ representing set B.

_____ elements of set A are in set B, the _____ between

e circles shows the _____ elements in both sets.

_____ of the elements in set A are in set B, the _____

presenting A and B _____ overlap showing _____ common

ements.

e the area that represents the relationship shown.

Date _____

ENT AND ANGLE PROOF NOTES

n Postulate: _____

stulate: _____

Proofs:

fs using the segment addition postulate.

A, B, and C are collinear, with B between A and C

$C = 5$

Statements	Reasons
d C are collinear, with B d C	1.
	2.

PARALLEL AND PERPENDICULAR LINES

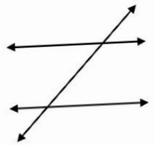
- Parallel Lines and Transversals
- Parallel Lines Proofs
- Perpendicular Line Theorems
- Slope
- Equations of Lines
- Graphing Equations

Date _____

ARALLEL LINES & TRANSVERSALS NOTES

ns:

el Lines: Two lines that are in the same _____ and never _____.



versal: A line that _____ two or more lines in a plane.



Alternate Interior Angles: Angles that lie _____ two lines, on _____ sides of the transversal.



Alternate Exterior Angles: Angles that lie _____ two lines, on _____ sides of the transversal.



Corresponding Angles: Angles that are in the _____ position on two lines cut by a transversal.



Consecutive Interior Angles: Also known as _____ _____ interior angles. They lie on the same side of the transversal, between the two lines.



Consecutive Exterior Angles: Also known as _____ _____ exterior angles. They lie on the same side of the transversal, outside the two lines.

ifying and Drawing Parallel Lines and Transversals:

aw this relationship in the box below: $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ are parallel. They are intersected by line r. bel the lines and label the point where the transversal intersects $\overleftrightarrow{AB}$ as point X and the point here the transversal intersects $\overleftrightarrow{CD}$ as Y.

Name_____ Date _____

SLOPE NOTES

efining Slope:

The slope of a line measures its _____ and _____.

Slope is the _____ of the _____ change (rise) to the _____ change (run) between _____ points on the line.

There are _____ types of slope for lines.

Slope is often represented by the variable _____.

Slope can be found using the formula: $m = \frac{rise}{run} = \frac{y_2 - y_1}{x_2 - x_1}$

es of slope:

Type of Slope	Definition	Example
Positive	• As the x-coordinate _____, the y-coordinate _____. • The line _____ from left to right.	
Negative	• As the x-coordinate _____, the y-coordinate _____. • The line _____ from left to right.	
Zero	• The y-coordinate remains _____ regardless of the x-coordinate.	

Date _____

PHING EQUATIONS NOTES

quations in Slope-Intercept Form:

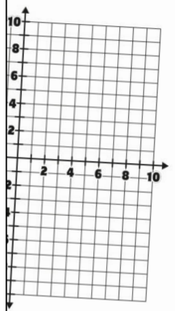
ar equation in slope-intercept form, we can graph the equation using the _____ and the _____.

_____.

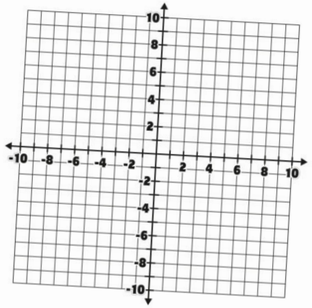
cept, use the _____ to determine and plot another point.

o _____ with a line.

tion $y = \frac{1}{2}x + 3$



2. Graph the equation $y = 2x - 1$



inear Forms:

be written in various forms, including:

CONGRUENT TRIANGLES

- Triangle Basics
- Isosceles and Equilateral Triangles
- Congruent Figures and CPCTC
- Triangle Congruence: SSS and SAS
- Triangle Congruence: ASA and AAS
- Congruence in Right Triangles
- Congruence in Overlapping Triangles
- Congruent Triangle Proofs
- Applications of Triangle Congruence

Date _____

TRIANGLE BASICS NOTES

gle is a _____ sided polygon with the following features:

ces: The _____ corners where two sides _____. Each _____ corresponds to an _____ within the triangle.

s: The _____ segments that connect the triangle's vertices. Each side is _____ a specific angle.

les: Formed at each _____ where the two sides _____. The sum of interior angles in any triangle is _____.

fying Triangles by Sides:

classifying triangles by sides, compare the length of each side.

Side Lengths	Type	Example
All **three sides** are _____ in length.	Equilateral Triangle	2 in., 2 in., 2 in.
Two sides are _____ in length. The congruent sides are called the _____.	Isosceles Triangle	2 in., 2 in., 1.5 in.
		3.35 in.

Name_____ Date _____

TRIANGLE CONGRUENCE: ASA AND AAS NOTES

ecall:

We have learned two ways to prove triangles are congruent so far: _____-_____-_____ and _____-_____-_____ triangle congruency.

et's look at two more ways that can be used to prove triangles are congruent.

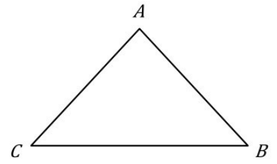
ngle-Side-Angle Congruence Theorem (ASA):

If two angles and the included side of one triangle are congruent to two angles and the included side of another triangle, then the two triangles are congruent.

mportant** The included side is the side *in between* the two angles.

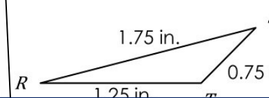
e it:

abel the included side of $\angle A$ and $\angle B$ with "c".
abel the included side of $\angle B$ and $\angle C$ with "a".
abel the included side of $\angle C$ and $\angle A$ with "b".

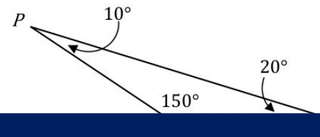


t:

tify the included angle or included side.



b)



Date _____

ATIONS OF TRIANGLE CONGRUENCE NOTE

gles play a crucial role in various real-world applications across engineering, d computer graphics due to their fundamental properties of equality.

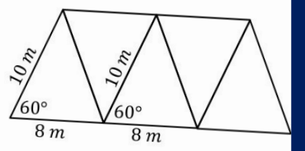
les in Engineering:

e most stable geometric shape, and _____ _____ are use _____ and _____ in structures like bridges, cranes, and trusses.

engineering, _____ _____ ensure components fit perfectly

signs requiring _____ and _____.

ed by triangular trusses. In each truss, the ers, 8 meters and the included angle is 60°. are congruent and explain why this ensures l.



in Architecture:

_____ _____ in designs to create _____, , and _____ _____ in structures like facades, dome

SPECIAL TRIANGLE RELATIONSHIPS

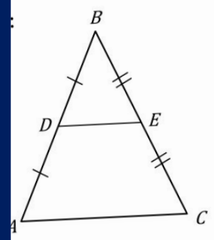
- Triangle Midsegments
- Perpendicular and Angle Bisectors
- Medians and Altitudes
- Indirect Proofs

Date _____

RIANGLE MIDSEGMENTS NOTES

e Midsegment

angle midsegment is a _____ segment that connects the _____ of des of the triangle.



In ΔABC, $\overline{AD}$ = _____ and $\overline{CE}$ = _____,

therefore, _____ is the midsegment of ΔABC.

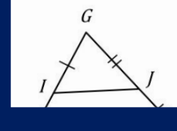
erties of Triangle Midsegment

e triangle midsegment will be _____ to the third side of the triangle (the side at is _____ to the midsegment.)

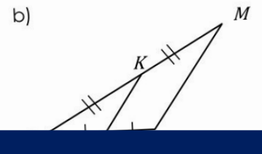
e triangle midsegment is _____ the length of the _____ side the side _____ to the midsegment.)

it:

ntify the midsegment of each triangle, then identify the line segments that would be parallel.



b)



Name_____ Date _____

MEDIANS AND ALTITUDES NOTES

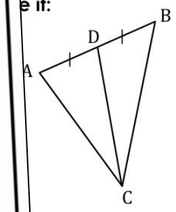
ecall:

o far we have seen **angle bisectors** and **perpendicular bisectors** create certain relationships within angles. Let's look at two more situations that can create relationships within triangles.

edian

e _____ of a triangle is a line segment that connects a _____ of e triangle to the _____ of the opposite side.

e it:

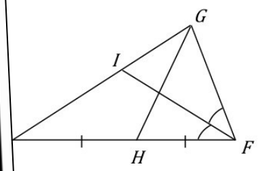


$\overline{CD}$ connects the vertex _____ to the midpoint of side _____.

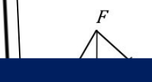
Therefore, _____ is a Median.

t:

tify the median of the triangles below.



_____ is the median because it connects the vertex _____ to the midpoint of side _____.



Date _____

IDIRECT PROOFS NOTES

ave learned three different ways of writing proofs:

ofs

ods begins with the same first step: to use the _____ informatio n of what we want to prove.

different than the three previous methods we've seen before. Indirect proofs _____.

o prove a statement by assuming the opposite (_____) of the ng that this _____ leads to a contradiction. We can still _____ in any of the three methods, but our approach will be

direct Proof:

ite: Start by assuming the _____ you want to prove is

gical steps and _____ information to deduce _____ from the assumption.

on: Identify a contradiction to the _____. For example, it own _____, _____, or _____.

assumption leads to a _____, it must be

QUADRILATERALS AND POLYGONS

- Classifying Polygons
- Interior and Exterior Angles
- Parallelograms
- Rectangles, Rhombi and Squares
- Diagonals of Quadrilaterals
- Trapezoids and Kites
- Quadrilaterals in the Coordinate Plane

Date _____

ASSIFY POLYGONS NOTES

Polygons:

olygon is a _____ two-dimensional shape made up of _____ segments.

e segments are called _____ and meet at points called _____.

segments do not _____.

eatures of polygons:

losed shape
raight sides
t least 3 sides

POLYGON	NON-POLYGONS

Name_____ Date _____

RECTANGLE, RHOMBI, AND SQUARES NOTES

ecall a parallelogram is a quadrilateral with opposite sides parallel and these properties:

✓ Opposite sides are congruent
✓ Opposite angles are congruent
✓ Consecutive angles are supplementary
✓ Diagonals bisect each other

ectangle

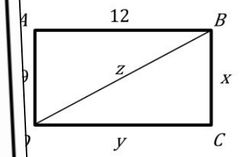
_____ is a specific type of _____.

has all the properties of the parallelogram in addition to these specific properties:

- 4 right angles
- Diagonals are congruent

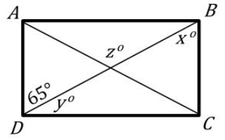
bel each of the properties on the diagram.
clude properties of the parallelogram too)

e it: The images below are rectangles. Use the properties to find missing values.



x = _____
y = _____
z = _____

2)



x = _____
y = _____
z = _____

Date _____

LATERALS IN THE COORDINATE PLANE NOTE

ateral is on a coordinate plane, use the _____ to determine
e of quadrilateral it is and to solve problems.

el the _____ on the coordinate plane for visual understanding.
y tools to determine which _____ are true for the quadrilateral.

_____: $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
_____: $\frac{y_2 - y_1}{x_2 - x_1}$
_____: $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$

formulas to determine properties and classify the quadrilateral.

What to check	
Opposite sides are parallel _____	Diagonals bisect each other _____
Adjacent sides are perpendicular _____	Diagonals are congruent

SIMILARITY

- Ratios and Proportions
- Similar Polygons
- Similar Triangle Proofs
- Similarity in Right Triangles
- Triangle Proportions
- Applications of Similarity

Date:_____

TIO AND PROPORTIONS NOTES

nd proportions appear in many variations throughout mathematics. From scale factors to we have been working with ratios and proportions for a while. Let's review some basic ion.

_____

s can be expressed in three different ways:

Fraction	Colon	Words
____	___:___	___to___

dent council formed a committee of high school students with 10 seniors, 7 juniors, 13 mores, and 8 freshmen. What is the ratio of seniors to the whole group?

$\frac{seniors}{whole\ group} =$ ____

Simplify the ratio: ____

ve seen this in geometry lessons as well.

ngles in a triangle are in a 1 : 2 : 3 ratio. What is the measure of each angle?

- Triangle angles have a sum of _____. So, the angle ratios will add up to _____.
- $___x + ___x + ___x =$ _____
- $_____x =$ _____
- $x =$ _____
- Find the other two angles by substituting the value of x.

Name: _____ Date: _____

SIMILARITY: RIGHT TRIANGLE NOTES

Review:

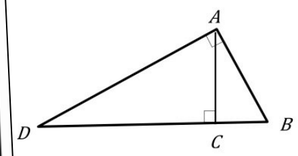
- Recall that the altitude of a triangle is a _____ line segment drawn from a _____ to the _____ side of the triangle (or the _____ of the opposite side if necessary).

ight Triangle Similarity Theorem

When a right triangle has an _____ drawn to the _____, it creates _____ smaller triangles, and all _____ triangles are _____ to each other.

e it:

aw all three triangles with the same orientation (put the right angle in the same location).



it:

w the altitude from the right angle to the hypotenuse, label the point formed M, then draw all e triangles with the same orientation.



Date: _____

CATIONS OF SIMILARITY NOTE

lve real-world problems using indirect measurement. **Indirect measurement** is a proportions and similar figures to find lengths, heights, or distances that are sible to measure directly.

asurement:

ognize _____.

_____ comparing the sides of the similar figures.

_____ to find the unknown measurement.

ortion:

$$\frac{Small\ Object}{Shadow\ of\ Small\ Object} = \frac{Large\ Object}{Shadow\ of\ Large\ Object}$$

or

$$\frac{Model}{Real\ Object} = \frac{Length\ on\ Drawing}{Actual\ Length}$$

casts a 4-foot shadow. They are standing next to a tree that casts a 20-foot the tree?

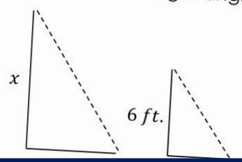
's rays are parallel and the tree and person both create a right angle with the create similar triangles like those below.

on.

___ = ___

on.

___ = ___



TRANSFORMATIONS

- Translations
- Reflections
- Rotations
- Dilations
- Combined Transformations
- Congruence and Similarity Transformations
- Symmetry

Date: _____

RANSLATIONS NOTES

sformation is a way to move a shape on a coordinate plane. There are two types of
ormations: _____ and _____-_____.

Transformations: _____

sformations with Rigid Motion:

gid transformations preserve _____ and _____.

ere are _____ main types of rigid transformations.

Translation is moving a figure from one location to another without _____ or _____ it. All points in the figure move the _____ distance in the _____ direction.

Rotation is the _____ of a figure around a fixed point (the center of rotation) by a certain angle. The _____ and _____ remain unchanged, but the position of the figure changes.

- **Reflection** is the _____ of a figure over a line (the line of reflection) to create a mirror image. The _____ and _____ remain the same, but the orientation is reversed.

y Terms:

Preimage: Refers to the _____ figure or shape _____ a transformation is applied. (Example: ΔABC)

Image: Refers to the _____ figure or shape that results from applying a

Name: _____ Date: _____

DILATIONS NOTES

Recall the three rigid transformations we have used so far:

_____ _____ _____

igid transformations preserve the _____ and _____ of a figure. The
nage is _____ to the pre-image.

on-rigid transformations change the _____ of the figure, but the image is still _____ to the pre-image.

he type of non-rigid transformation is a _____, which will either _____ or _____ the figure. The _____ (r) is the
mber that tells how much the figure is _____ or _____.

- If $r > 1$, the figure _____.
- If $0 < r < 1$, the figure _____.
- If $r = 1$, the figure _____.

tion Rule (with center of dilation at origin):

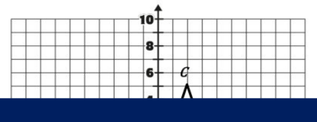
- If a point is at (x, y), the scale factor is r, and the center of dilation is (0, 0), then $(x, y) \rightarrow (r \cdot x, r \cdot y)$.
- To dilate an image, perform the dilation for each _____.

it:

Dilate the point $A(2, 3)$ with a scale factor: $r = 2$.

$A' = (____ \cdot 2, ____ \cdot 3) =$ _____

Dilate the point $B(-4, 6)$ with a scale factor: $r = 0.5$.



Date: _____

YMMETRY NOTES

ry?

ure has symmetry if it can be _____ (_____, or _____) and still appear _____ to its original form.

_____

n: _____

y: _____

TYPES OF SYMMETRY

nal Symmetry Symmetry)	**Rotational Symmetry**	**Point Symmetry (180° Rotational Symmetry)**
reflectional it can be ___ along a line _____ ____ _____) so that _____ _____.	A figure has rotational symmetry if it can be _____ less than _____° around a central point (called the _____ _____ _____) and still look the same.	A figure has point symmetry if every part of the figure has a _____ part that is the same _____ from a _____ point but in the _____ direction.
iangle has		

RIGHT TRIANGLES AND TRIGONOMETRY

- The Pythagorean Theorem
- Special Right Triangles
- Trigonometry
- Angles of Elevation and Depression
- Law of Cosines
- Law of Sines

Date: _____

YTHAGOREAN THEOREM NOTES

y the Parts of a Right Triangle:

all that a right triangle has one _____ angle.

two sides that form the right angle are called the _____.

longest side, found opposite the right angle, is called the _____.

the parts of each right triangle below. Use a and b for the legs and c for the hypotenuse.

b)

c)

ythagorean Theorem

Pythagorean Theorem is a fundamental rule in geometry that shows the relationship veen the side lengths of a right triangle.

Pythagorean Theorem states:

any _____, the _____ of the length of the _____ (c) is equal to the _____ of the _____ of the ngths of the two _____ (a and b).

he formula is: $a^2 + b^2 = c^2$ where ___ and ___ are the legs and ___ is the hypotenuse.

e it: Use the diagrams below to set up the Pythagorean Theorem formula.

e)

f)

ame: _____ Date: _____

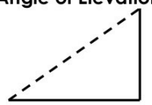
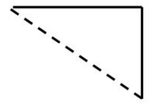
ANGLES OF ELEVATION AND DEPRESSION NOTES

When using trigonometry ratios in real-world applications, we often need to identify or use the ngles of elevation or depression to find solutions.

eywords:

- **Angle of elevation** – the angle _____ from the _____ line of sight to an object _____.
- **Angle of depression** – the angle _____ from the _____ line of sight to an object _____.

e it: Label the angle of elevation and depression in the diagrams below.

Angle of Elevation	Angle of Depression
	

gles of elevation and depression form right triangles, allowing us to use the trig ratios:

_____, _____, and _____ to solve problems.

steps used to solve problems using angles of elevation and depression are the same steps d to solve problems in the previous lesson.

. Draw a _____.

. Identify _____ and _____.

Label _____, _____ and _____ relative to the _____ angle.

Date: _____

AW OF SINES NOTES

nes is used to find angles and sides of non-right triangles where we know or _____. Similarly, the Law of Sines is used when we have a non-righ t to find a missing _____ or _____.

e ratio of a side length to the sine of its opposite angle is constant for all three

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

re the _____ of the triangle and A, B, and C are the angles ___ those sides.

f Sines:

___ angles and _____ side. (AAS)

___ angles and the _____ side. (ASA)

___ sides and a _____ angle. (SSA – the ambiguous case)

ensions Using Law of Sines:

___ information.

_____ or _____ do you know and what _____ or ___ are you looking for?

_____ using the Law of Sines ratios.

_____ side or angle.

AREA

- Perimeter
- Circumference and Area of Circles
- Area of Triangles
- Area of Quadrilaterals
- Area of Regular Polygons
- Perimeter and Area of Similar Figures
- Composite Figures and Shaded Regions

Date: _____

PERIMETER NOTES

the definition of perimeter:

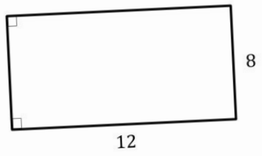
g perimeter:

ul reminders:

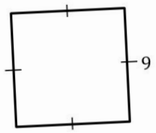
ar polygons: _____

gruent sides: _____

t: Find the perimeter of each polygon.



b)



d) Regular pentagon with side length of 11 cm.

Name: _____ Date: _____

AREA OF QUADRILATERALS NOTES

Quadrilaterals are polygons with _____ sides. Finding the area of a quadrilateral will vary depending on which type it is.

arallelograms:

ectangle: _____

hombus: _____

uare: _____

Quadrilateral	Area Formula
Rectangle	$A = l \times w$ or $A = b \times h$
Rhombus	$A = b \times h$ or $A = \frac{1}{2} d_1 \cdot d_2$
Square	$A = s^2$

ortant:

The height of the quadrilateral is the _____ distance between the two _____.

The height can be, but may not always be, one of the _____ of the quadrilateral.

Date: _____

COMPOSITE FIGURES AND SHADED REGIONS NOTE

ure is a figure made up of _____ or more simple _____ shapes.

of a Composite Figure:

he figure into _____ shapes that we already know how to find

_____ of each shape.

_____ of each simple shape using the appropriate formula.

or _____ the areas.

_____ areas if the figure is made by _____ shapes.

_____ areas if part of the figure is _____ or _____.

_ your answer with _____.

s to Remember:

Shape	Area Formula
Rectangles	$A = b \times h$
hombus/ Square/ Kite	$A = \frac{1}{2} d_1 \cdot d_2$
Kite	$A = \frac{1}{2} d_1 \cdot d_2$
Trapezoid	$A = \frac{1}{2}(b_1 + b_2) \times h$

SURFACE AREA AND VOLUME

- Space Figures and Cross Sections
- Surface Area of Prisms and Cylinders
- Surface Area of Pyramids and Cones
- Volume of Prisms and Cylinders
- Volume of Pyramids and Cones
- Surface Area and Volume of Spheres
- Composite Three-Dimensional Figures
- Area and Volume of Similar Solids

Date: _____

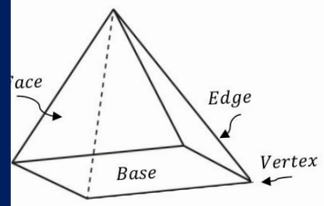
SS SECTIONS AND SPACE FIGURES NOTES

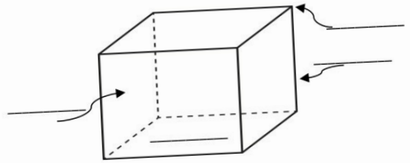
e figure (or _____ _____) is a three-dimensional figure that has
_____, _____, and _____.

ulary:

e: _____
e: _____
ex: _____
e: _____
eral Face: _____

Try it: Label the face, edge, base, and vertex





s of Space Figures:

igure	Characteristics	Example
sm	• Two _____, _____ bases connected by _____ faces.	

Name: _____ Date: _____

VOLUME: PYRAMIDS AND CONES NOTES

Recall:

- Volume measures how much _____ a three-dimensional object takes up. It tells you how much the object can _____ or how much fits _____ the shape. The general formula for volume is: $\boldsymbol{Volume = B \cdot h}$
- Volume is measured in _____ _____ because it measures all three dimensions.

inding Volume of Pyramids:

Pyramids and cones both come to a _____ at the top (_____).

The volume of a pyramid is always _____ of the volume of a prism with the same base and height, so the formula for volume of a pyramid is: $\boldsymbol{V = \frac{1}{3}B \cdot h}$

Where:

- B = area of the _____.
- h = height measured _____ from the center of the base to the _____.

ps:

1. Identify the shape of the _____.
2. Find the area of the _____.
3. Multiply this by the _____ perpendicular to the base.
4. Multiply by _____.

it:

ind the volume of the pyramid.

1. Identify the base shape:

Date: _____

ND VOLUME OF SIMILAR SOLIDS NOTE

ns are polygons whose shapes are the _____ but the size may be _____.

e _____ and their sides are _____.

ve similar qualities.

imilar if all corresponding _____ dimensions are proportional and _____ are congruent.

ilar, the scale factor is:

$$Scale\ Factor = \frac{Linear\ measurement\ of\ larger\ solid}{Linear\ measurement\ of\ smaller\ solid}$$

nts include: _____, _____, _____, _____, _____.

n represented with : _____.

e similar. The smaller has a radius of 3 cm, and the larger has a radius of 12 cm.
ctor.

urement of the larger figure: _____

urement of the smaller figure: _____

_____

CIRCLES AND CONICS

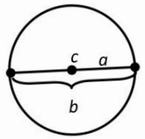
- Parts of a Circle
- Central Angles
- Inscribed Angles
- Tangent Lines
- Chords and Arcs
- Angle Measures in Circles
- Segment Lengths in Circles
- Arc Length and Area of Sectors
- Circles in the Coordinate Plane

Date: _____

ARTS OF A CIRCLE NOTES

arts of a Circle:

he center, radius, and diameter of the circle.



_____

_____

_____

_____ of the circle is the _____ point in the

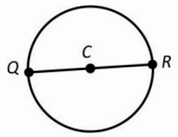
_____ of the circle. Circles are named by their _____.

_____ is the _____ that goes through the

_____ and connects the two _____ on the circle.

_____ is the _____ from the _____ to

_____ on the circle.



What is the name of this circle? _____

What is the center of the circle? _____

What is the radius of the circle? _____

What is the diameter of the circle? _____

Name:_____ Date: _____

CHORDS AND ARCS NOTES

Properties of Chords:

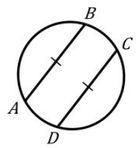
Recall that a chord is a line segment whose _____ are _____ the circle.

- The _____ is the _____ chord in a circle.
- Congruent _____ intercept congruent _____.
- Congruent _____ correspond to congruent _____.
- Chords that are the same _____ from the center are _____.

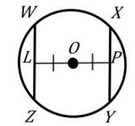
ee it:

a) When $\overline{AB} \cong \overline{DC}$, $\widehat{AB} \cong$ _____.

When $\widehat{AB} \cong \widehat{DC}, \overline{AB} \cong$ _____.



b) When $\overline{OL} \cong \overline{OP}, \overline{WZ} \cong$ _____.



t: Use the properties of chords to solve the problems.

ind the measure of $\widehat{SR}$.

50°

2. Find the length of $\overline{CD}$ if $m\overline{AB} = 12$.

B

3. Find the length of $\overline{LM}$.

65°

Date: _____

S IN THE COORDINATE PLANE NOTE

of a circle is the set of all _____, (x, y), that are a _____

ed the _____, from a _____ point, called the _____

e is on the coordinate plane, the equation is derived from the

_____ _____, used to find the _____ between

_____.

on of a Circle:

on of a circle where each point (____, ____) is a fixed distance (_____)

nt (_____) labeled (h, k).

oint on the circle (____, ____) is exactly _____ units away from the center

e the _____ formula: $\boldsymbol{d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}}$

_____ for one of the _____ to get: $d = \sqrt{(x - ___)^2 + (y - ___)^2}$

n the _____ to any _____ is equal to the radius so _____=_____ :

$___ = \sqrt{(x - ___)^2 + (y - ___)^2}$

to eliminate the radical: $r^2 = (x - ___)^2 + (y - ___)^2$

mula to get the standard equation of a circle:

_____