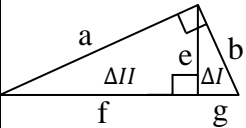
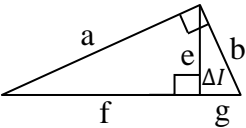
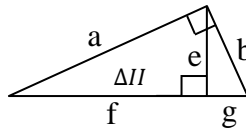
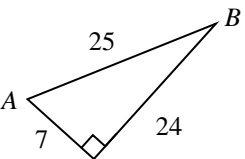


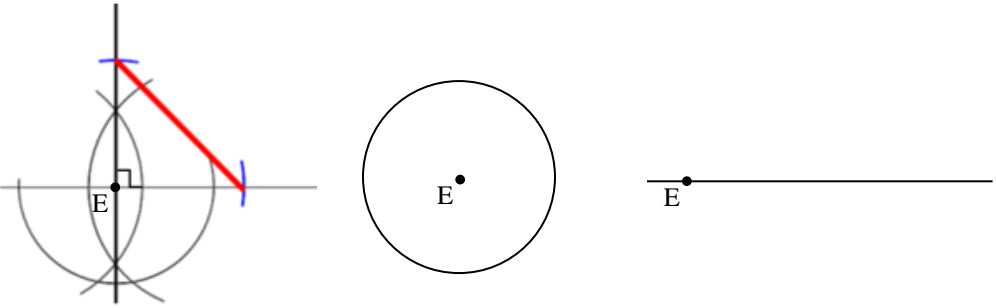
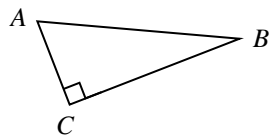
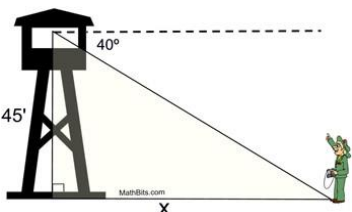
GEOMETRY**UNIT 8: RIGHT TRIANGLES******SHOW ALL WORK******BRING COLORED PENCILS TO CLASS BEGINNING WITH LESSON 8-3**

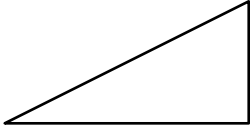
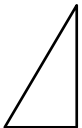
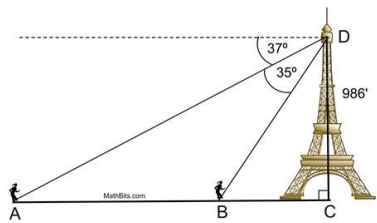
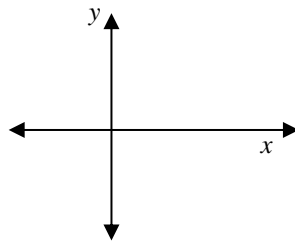
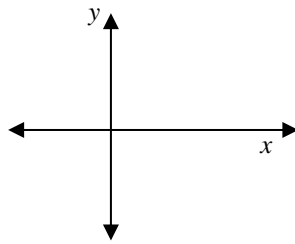
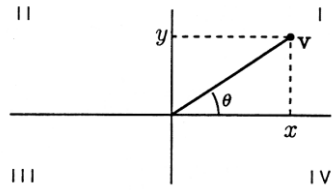
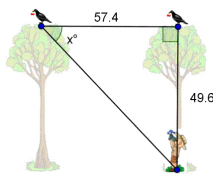
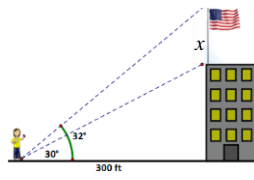
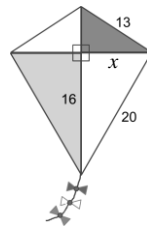
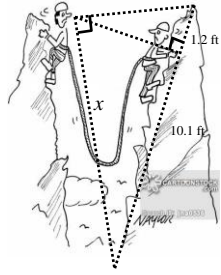
YOU NEED A COMPASS FOR LESSONS AND THE HOMEWORK

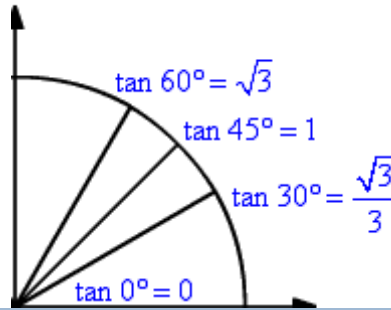
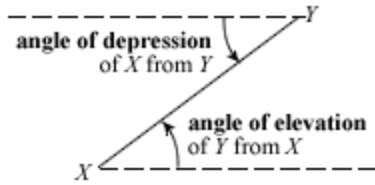
LESSON	TOPIC	CCLS	ASSIGNMENT
8-1	PYTHAGOREAN THEOREM (CH 5-7) PYTHAGOREAN TRIPLES	G-SRT.4 G-SRT.6	PROBLEM SET IN NOTES
8-2	SPECIAL RIGHT TRIANGLES (CH 5-8)	G-SRT.5 G-SRT.6	P.360: 9-10, 14-16,19-21
8-3	SIMILARITY IN RIGHT TRIANGLES (CH 8-1); GEOMETRIC MEAN	G-SRT.6 G-SRT.2	P.521: 9,25-27, 36-39;48
8-4	MINI QUIZ 1 TRIGONOMETRIC RATIOS (CH 8-2)	G-SRT.6	P. 529 22-24, 31-33, 37-42,49,68
8-5	USING TRIGONOMETRIC RATIOS (CH 8-2)	G-SRT.6	WORKSHEET 8-5
8-6	PYTHAGOREAN THEOREM W/TRIG RATIOS RIGHT TRIANGLE CONSTRUCTIONS (REVIEW)	G-CO.12 G-SRT.6	WORKSHEET 8-6
8-7	COMPLEMENTARY SINE AND COSINE	G-SRT.7	WORKSHEET 8-7
8-8	INVERSE TRIGONOMETRIC RATIOS ANGLES OF DEPRESSION & ELEVATION	G-SRT.8	WORKSHEET 8-8
8-9	DOUBLE TRIG PROBLEMS	G.SRT.5 G.SRT.8	WORKSHEET 8-9
8-10	SLOPE & MIXED PRACTICE QUIZ 2 - TRIG	G.SRT.5 G.SRT.8	WORKSHEET 8-10
8-11	APPLICATIONS OF TRIG RATIOS	G.SRT.5 G.SRT.8	WORKSHEET 8-11
8-12	REVIEW AND STUDY GUIDE		FINISH REVIEW PACKET
T	TEST		CUMULATIVE REVIEW #8 BRIDGE TO UNIT 9 DUE NEXT CLASS

GEOMETRY CLASS LESSON SUMMARIES FOR UNIT 8: RIGHT TRIANGLES

DAY	MAIN POINTS / FORMULAS TO REMEMBER	QUESTIONS AFTER HMWK
8-1	<p>Pythagorean Theorem: _____</p> <ul style="list-style-type: none"> Used to find the length of the 3rd side when you have <ul style="list-style-type: none"> _____ side lengths when you have algebraic _____ for all 3 side lengths when you have an extended ratio for all 3 sides Can also be used to _____ a triangle <i>is</i> a right triangle. <p>Common Primitive Pythagorean Triplets*:</p> <p>{ - - } { - - }</p> <ul style="list-style-type: none"> May be used when you know _____ sides of the right triangle! * These numbers must be _____ that satisfy the Pythagorean Thm 	
8-2	<p>Special Right Triangles:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 5px;">30° 60° 90°</div> <div style="border: 1px solid black; padding: 5px; margin: 5px;">45° 45° 90°</div> </div> <p>Solving for n may require _____ the denominator.</p> <p>Rationalize and simplify the example: $\frac{10}{\sqrt{5}} =$</p> <p>Multiplying an identical radical by itself example: $\sqrt{3}\sqrt{3} =$ _____</p>	
8-3	<p>Geometric Mean</p> <p><i>Color each example and write the proportion using the appropriate mean</i></p> <p style="text-align: center;">Altitude Rule Leg-Hypotenuse Rules</p> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> $\frac{\Delta I}{\Delta II} : \text{---} = \text{---}$ $\frac{\Delta I}{\Delta III} : \text{---} = \text{---}$ $\frac{\Delta II}{\Delta III} : \text{---} = \text{---}$ </div>	
8-4 8-5	<p>Trigonometric Ratios – used to find the length of a _____ in a right triangle given an angle measure.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $\frac{S}{H} \quad \frac{A}{H} \quad \frac{T}{A}$ </div> <p>For the given angle, first label the sides of the right triangle as _____, _____, and _____ correspondingly.</p> <p style="text-align: right; margin-right: 100px;">$\sin \theta = \frac{opp}{hyp}; \cos \theta = \frac{adj}{hyp}; \tan \theta = \frac{opp}{adj}$</p> <p>Fill in the trig ratios for the given right triangle:</p> <div style="display: flex; align-items: center; margin-top: 20px;">  <div style="margin-left: 20px;"> $\sin A = \text{---}; \cos A = \text{---}; \tan A = \text{---}$ $\sin B = \text{---}; \cos B = \text{---}; \tan B = \text{---}$ </div> <div style="border: 1px solid black; padding: 5px; margin-left: 20px; font-size: small;"> Note which two ratios are equal </div> </div>	8-4 8-5

<p>8-6</p>	<p>Right Triangle Constructions (review)</p>  <p>Isosceles Right Triangle Inscribed Square Scalene Right Triangle <i>(you construct these w/vertex E)</i></p> <p>Pythagorean Theorem with Trig Ratios – first draw and label a right triangle! Example: Given $\sin\theta = \frac{8}{17}$, write the ratio for $\cos\theta$. *Remember, you don't need to solve for θ.</p> <p>$\cos\theta = \text{---}$</p>	
<p>8-7</p>	<p>Complementary Sine and Cosine (Co-Functions)</p> <p>-Since $\triangle ABC$ is a right triangle with right $\sphericalangle C$, then angles A and B are _____</p> <p>-If $\sin A = \cos B$, then $A+B = \text{---}$ Therefore, $\sin\theta = \cos(\text{---})$</p> <p>-2 Applications:</p> <ol style="list-style-type: none"> Complementary Angles: If $\sin(7x)^\circ = \cos(9x - 8)^\circ$, then _____ Equal Trig Ratios: If $\sin A = 7x$ and $\cos B = 9x - 8$, then _____ 	
<p>8-8</p>	<p>Inverse Trig – used to find the measure of the _____. Write the ratios in using opp, adj and hyp:</p> $\sin^{-1}(\text{---}) = \theta; \cos^{-1}(\text{---}) = \theta; \tan^{-1}(\text{---}) = \theta$ <p>Angles of Depression & Elevation: relative to horizontal line of _____</p>  <p>LABEL which angle is the angle of depression from a person in the tower as D and which angle is the angle of elevation from the person with the binoculars as E. MARK which angles are congruent.</p>	

<p>8-9</p>	<p>Double Trig – often used with the _____ postulate to find a part of a segment such as the distance (AB) between the two runners below. Example for finding AB: Let $AB=x$, $BC=y$, $AC=z$</p> <ul style="list-style-type: none"> Segment Addition Equation Draw each of the triangles and write an appropriate trig ratio that will allow you to solve for the indicated length. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>AC</p>  </div> <div style="text-align: center;"> <p>BC</p>  </div> </div> <div style="text-align: right; margin-top: 20px;">  </div>	
<p>8-9</p>	<p>Slope = $\frac{\text{rise}}{\text{run}}$</p> <p>Given θ, label which side of the right triangle is the opposite and which is the adjacent. Then relabel as rise and run.</p> <p>Examples – First draw the angle passing through the origin, draw the right triangle, and write the slope of the line in terms of the tangent function</p> <p>1) Angle of elevation of 48° 2) Angle of depression of 37°</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Slope: _____</p> </div> <div style="text-align: center;">  <p>Slope: _____</p> </div> </div> <div style="text-align: right; margin-top: 20px;">  </div>	
<p>8-10</p>	<p>Applications Identify which approach you would use to determine the value of x: Double Trig, Pythagorean Theorem, Geometric Mean, Inverse Trig (only one answer per scenario)</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>_____</p> </div> <div style="text-align: center;">  <p>_____</p> </div> <div style="text-align: center;">  <p>_____</p> </div> <div style="text-align: center;">  <p>_____</p> </div> </div>	
<p>Review</p>		



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15,000 ft
25°
ground distance
25°

Geometry
geometry.jdeer.com - 259 x 218 - Search by image
In the picture above, $\angle 1$ is an angle of depression from the STAR's line of sight. $\angle 2$ is an angle of elevation from the SUN's line of sight and $\angle 3$ is an ...

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AND THE OF ELEVATION AND DEPRESSION

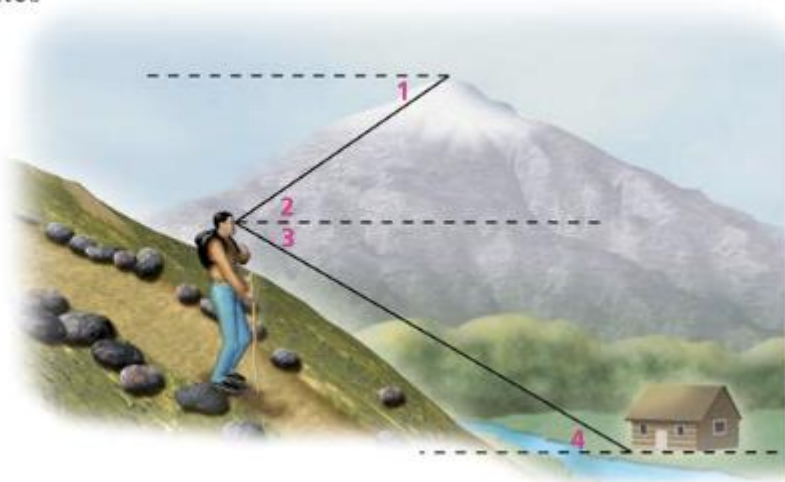
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HOLT 2016-17

Describe each angle as it relates to the situation shown.

- a. $\angle 1$ $\angle 1$ is the angle of depression from the peak to the hiker.
- b. $\angle 4$ $\angle 4$ is the angle of elevation from the hut to the hiker.



Describe each angle as it relates to the situation in Example 1.

- a. $\angle 2$
- b. $\angle 3$

Describe each angle as it relates to the situation in the diagram.

- 1. $\angle 1$
- 2. $\angle 2$
- 3. $\angle 3$
- 4. $\angle 4$
- 5. $\angle 5$
- 6. $\angle 6$
- 7. $\angle 7$
- 8. $\angle 8$

