Trigonometry Exam 1- Test Prep

Degrees, Minutes, and Seconds

Convert 7.237 ° into DMS. Round to the nearest second

Convert 34.579 ° into DMS. Round to the nearest second. (Do This one by hand!)

Convert 8 ° 29’ 5” into a decimal. Round to the nearest thousandth.

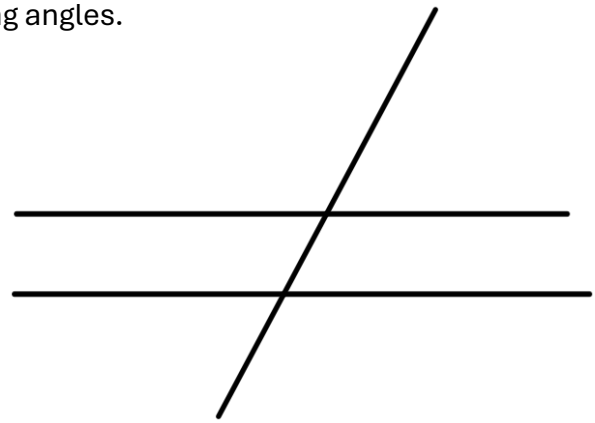
Convert 10 ° 30’ 2” into a decimal. Round to the nearest thousandth. (Do this one by hand)

Angle Relationships

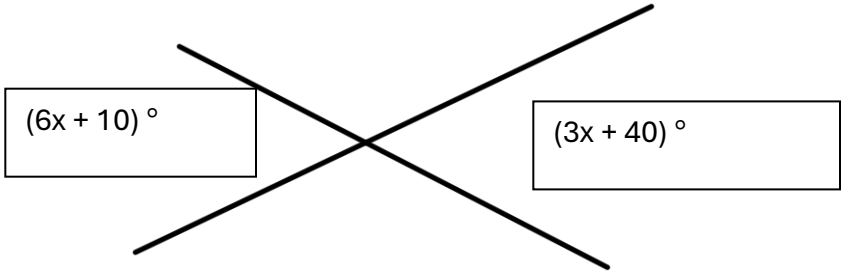
What is the least positive coterminal angle of 750 °?

What is the least positive Coterminal angle of -1080?

One angle has a measure of 47°. Find all other missing angles.



Find the Measure of each angle



<u>Similar and Congruent Triangles:</u>

Two Triangles are congruent. One has a length of 7cm, 9cm, and 12cm. What are the side lengths of the other triangle.

Triangle ABC is similar to DEF. AB = 3cm, BC= 4cm, and AC= 5cm. DE=6cm, and EF= 8cm. Find DF.

Cofunctions

Sin has a measure of 45 °. Find cos.

Cot has a measure of 56 °. Find Tan.

Compare the trigonometric functions. Which is larger. Cos 80 ° or Cos 25 °?

Compare the trigonometric functions. Which is larger. Sin75 ° or Sin30 °?

Pythagorean Theorem

Triangle ABC has side A= 5cm, and B= 6cm. What is the length of side C? Round to the nearest tenth. Use the formula r=$\sqrt{x^2 + y^2}$

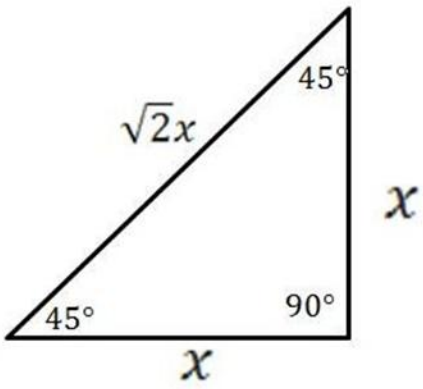
Triangle PQR has P=3cm, and R=7cm. Find the missing side using the formula $sin^2 + cos^2 = 1$.

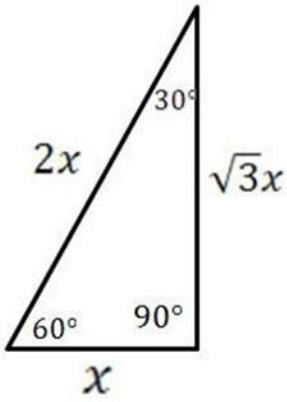
Distance formula

D=$\sqrt{(x^2 - x^1)^2 + (y^2 - Y^1)^2}$

Find the distance between (4,7) and (8,3)

Special Right Triangle:





There is a 30°-60°-90° Triangle. X = 5. Find the other sides of the triangle.

There is a 45°-45°-90° Triangle X√2= 9. Find the other sides of the triangle.

<u>6 Trig Functions + Reference Angles</u>

	Sin	Cos	Tan	Csc	Sec	Cot
30 °						
45 °						
60 °						

What the value of the Reference angles of the three major trig functions at 225 ° and then write their value.

Find the reference angles for the three major trig functions at 150 ° and then write their value.

Find the reference angles for the three major trig functions at 300 ° and then write their value.

Triangle ABC has <A=30 °, and side a=8.967cm and find side b.

Triangle ABC has <A=70 °, and side a=5.732cm. Find the side c and all missing sides and angle.

Grade Resistance:

$F=W\sin\theta$

1. The car weighing 1500lbs is going uphill at 4.56°. Find both the parallel and perpendicular weight acting to the slope. Show all your steps.

2. The car weighing 970lbs is going downhill at 7.74°. Find both the parallel and perpendicular weight acting to the slope. Show all your steps.