Law of Sines
Law of Cosines



Law of Sines
Law of Cosines

Name_____
Date _____ Period _____

Round angles to the nearest tenth and round sides to the nearest hundredth

1. Use the Law of Sines to solve the triangle.

$C = 20°$
$B = 10°$
$c = 33$

2. Use the Law of Sines to solve the triangle.

$B = 150°$
$a = 10$
$b = 3$

3. Use the Law of Cosines to solve the triangle.

$B = 110°$
$a = 4$
$c = 4$

4. Use the Law of Cosines to solve the triangle.

$a = 2.5$
$b = 5.0$
$c = 4.5$

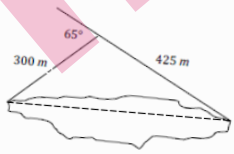
For questions 5 – 8, find the area of the trian

5. $B = 80°, a = 4, c = 8$

7. $A = 110°, b = 22, c = 21$

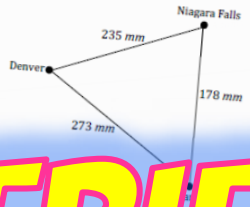
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9. To approximate the length of a marsh, a surveyor walks 425 meters from point A to point B. Then the surveyor turns 65° and walks 300 meters to point C. Approximate the length AC of the marsh.



10. The circular arc of a railroad curve has a diameter of length 3000 feet and a central angle of 40°. Draw a picture. Find the length of the circular arc. $s = r\theta$

11. On a map, Orlando is 178 millimeters due south of Niagara Falls, Denver is 273 millimeters from Orlando and 235 millimeters from Niagara Falls. Find the bearing of Denver from Orlando.



2012 F

Jean Adams

PREVIEW

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LAW OF SINES AND LAW OF COSINES PRACTICE

OBJECTIVE:

This is a free homework assignment from my unit on ***Analytic Trigonometry*** for students enrolled in PreCalculus.

You may be interested in purchasing the Activities & Assessments Bundle for the Unit.

Please visit my store for more engaging task card activities.

PREVIEW

Law of Sines and Law of Cosines Practice

OBJECTIVE:

To build an understanding of the Law of Sines and the Law of Cosines for Algebra 2 Honors, Pre-Calculus, Trigonometry, and College Algebra students by providing concentrated practice.

ACTIVITY:

Students will complete 11 questions related to mastery of the Law of Sines, the Law of Cosines, Heron's Formula, and practical applications related to these concepts of upper level mathematics courses.

DIRECTIONS:

Copy a worksheet for each student to complete.

ANSWERS:

1. $A = 150°; a \approx 48.24\,;\ b \approx 16.76$

2. no triangle possible

3. $A = 35°\,;\ C = 35°\,;\ b \approx 6.55$

4. $A \approx 29.9°\,;\ B \approx 86.2°;\ C \approx 63.9°$

5. $A \approx 15.76\,u^2$

6. $A \approx 9.80\,u^2$

7. $A \approx 217.08\,u^2$

8. $A \approx 8.36\,u^2$

9. $AC \approx 615.14\,meters$

10. $s \approx 1047.20\,ft$

11. $N\ 58.4°\ W$

PREVIEW

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4. Use the Law of Cosines to solve the triangle.

$a = 2.5$
$b = 5.0$
$c = 4.5$

For questions 5 – 8, find the area of the triangle.

5. $B = 80°, a = 4, c = 8$

6. $a = 4, b = 5, c = 7$

7. $A = 110°, b = 22, c = 21$

8. $a = 12.3, b = 15.8, c = 3.7$

PREVIEW

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