Name: _____ **Class:** _____ **Date:** _____ **ID: A**

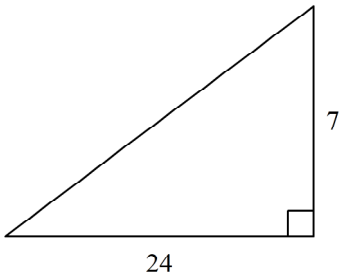
GM Chapter 08

1. A right triangle has a hypotenuse length of 41, and one side length of 15. Do the side lengths form a Pythagorean triple? Explain.

2. A triangle has side lengths 11, 17, and 12. Is the triangle acute, obtuse, or right? Explain.

Find the length of the missing side. The triangle is not drawn to scale.

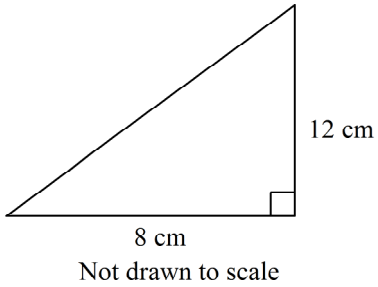
____ 3.



A. 25 B. 62 C. 168 D. 625

Find the length of the missing side. Leave your answer in simplest radical form.

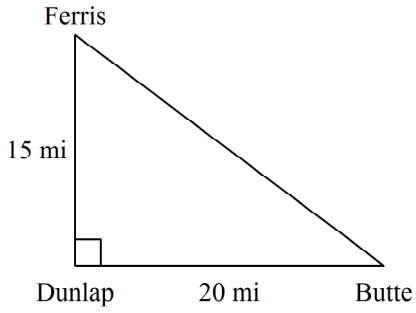
____ 4.



Not drawn to scale

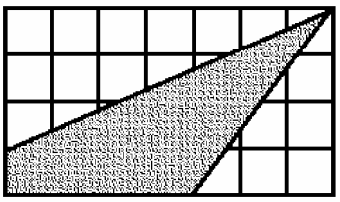
A. $\sqrt{22}$ cm B. $2\sqrt{38}$ cm C. 208 cm D. $4\sqrt{13}$ cm

____ 5. Wayne used the diagram to compute the distance from Ferris, to Dunlap, to Butte. How much shorter is the distance directly from Ferris to Butte than the distance Wayne found?



A. 20 mi B. 25 mi C. 10 mi D. 35 mi

____ 6. The figure is drawn on centimeter grid paper. Find the perimeter of the shaded figure to the nearest tenth.



A. 17.6 cm B. 10.8 cm C. 15.6 cm D. 18.0 cm

____ 7. Quilt squares are cut on the diagonal to form triangular quilt pieces. The hypotenuse of the resulting triangles is 4 inches long. What is the side length of each piece?

A. $2\sqrt{3}$ C. $4\sqrt{2}$

B. 2 D. $2\sqrt{2}$

____ 8. A piece of art is in the shape of an equilateral triangle with sides of 20 in. Find the area of the piece of art. Round your answer to the nearest tenth.

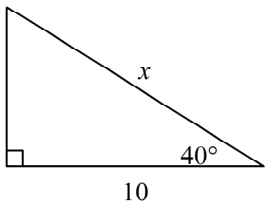
A. 141.4 in.^{2} B. 173.2 in.^{2} C. 346.4 in.^{2} D. none of these

____ 9. A sign is in the shape of a rhombus with a 60° angle and sides of 6 cm long. Find its area to the nearest tenth.

A. 2.6 cm^2 B. 5.2 cm^2 C. 31.2 cm^2 D. 15.6 cm^2

Find the value of *x*. Round to the nearest tenth.

____ 10.



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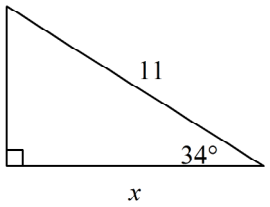
A. 7.8 B. 7.7 C. 13.5 D. 13.1

____ 11.



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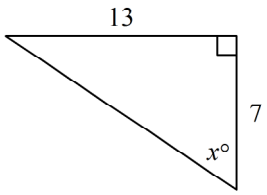
A. 13.8 B. 9.1 C. 9.4 D. 13.3

Find the value of x to the nearest degree.

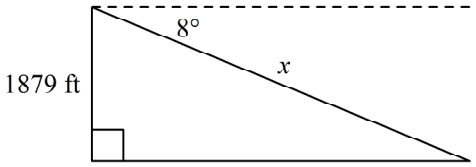
____ 12.



Not drawn to scale

A. 28 B. 37 C. 62 D. 79

____ 13. To approach the runway, a pilot of a small plane must begin a 8° descent starting from a height of 1879 feet above the ground. To the nearest tenth of a mile, how many miles from the runway is the airplane at the start of this approach?



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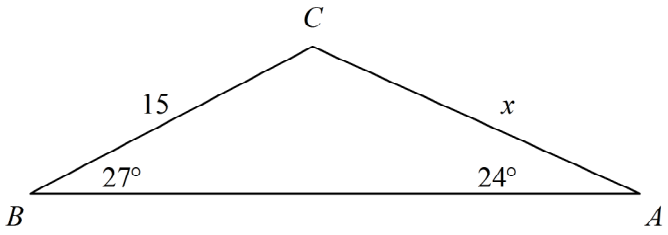
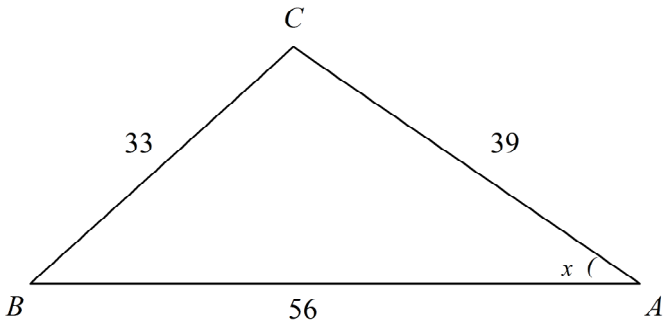
A. 2.6 mi B. 2.5 mi C. 0.4 mi D. 13,501.2 mi

____ 14.



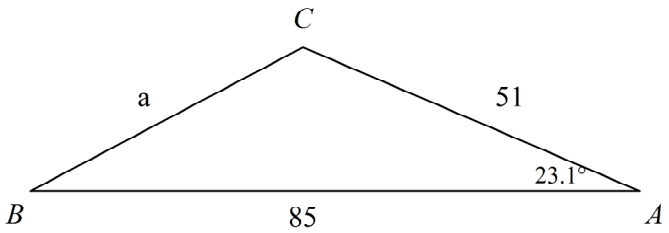
A. 16.7 by The Law of Sines (SAS)
B. 7.5 by The Law of Cosines (SAS)
C. 13.4 by The Law of Cosines (SSS)
D. 2.8 by The Law of Sines (SSA)

____ 15.



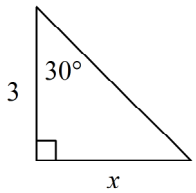
A. 35.2° by The Law of Cosines
B. 43.0° by The Law of Sines
C. 35.2° by The Law of Sines
D. 43.0° by The Law of Cosines

____ 16. Find the measure of *a*.



A. 51
B. 46
C. 53
D. 43

____ 17.



Not drawn to scale

A. 1.5
B. 1.7
C. 5.2
D. 2.6