Practice Page

Working with Right Triangles

Math A

Answer the following questions pertaining to right triangles.

1.

A ladder leans against a building. The foot of the ladder is 6 feet from the building. The ladder reaches height of 14 feet on the building.

a. Find the length of the ladder to the nearest foot.

Choose:

○ 14 ○ 15 ○ 15.2 ○ 16

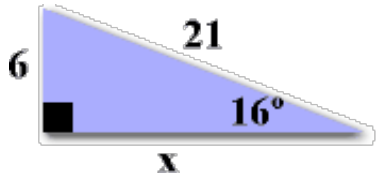
b. Find to the nearest degree, the angle the ladder makes with the ground.

Choose:

○ 23 ○ 24 ○ 66 ○ 67

Explanation

2.



Which statement can NOT be used to find the length of x?

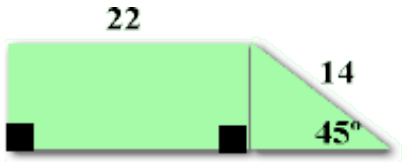
Choose:

- $\tan 16 = \frac{6}{x}$
- $\cos 16 = \frac{x}{21}$
- $\tan 74 = \frac{x}{6}$
- $\tan 16 = \frac{x}{6}$

3. From a point on the ground 25 feet from the foot of a tree, the angle of elevation of the top of the tree is 32°. Find to the nearest foot, the height of the tree.

Answer

4.



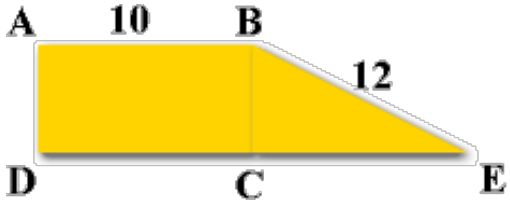
The figure shown on the left is a trapezoid. Using the information given, find the area of this trapezoid to the nearest square unit.

Answer

5. From the top of a barn 25 feet tall, you see a cat on the ground. The angle of depression of the cat is 40°. How many feet, to the nearest foot, must the cat walk to reach the barn?

Answer

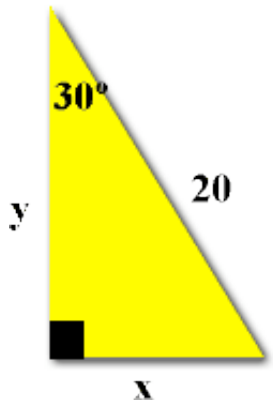
6.



In the figure on the left, ABCD is a rectangle whose perimeter is 30. The length of BE is 12. Find to the nearest degree, the measure of angle E.

Answer

7.



a. Find x.

b. Find y.

Explanation

a. Choose:

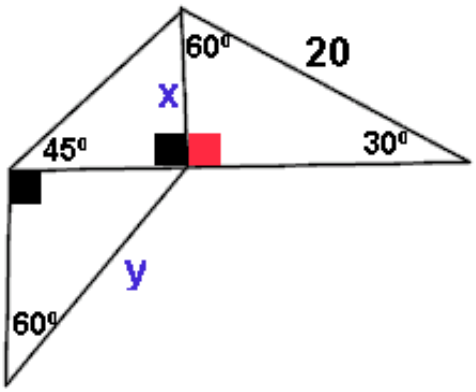
- 5
- 10
- 14.1
- 17.3

b. Choose:

- 5
- 10
- 14.1

17.3

8. This is a hard problem!!!



a. Find x.

b. Find y.

a. Choose:

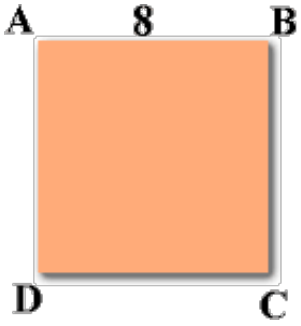
- 10
- 14.1
- 17.3

b. Choose:

- 10
- 11.5
- 15.2
- 17.3

Explanation

9.

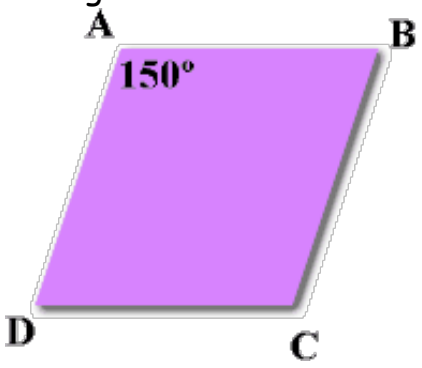


In the figure on the left, ABCD is a square whose side is 8 units. Find the length of diagonal AC to the nearest tenth.

Answer

10. In the figure below, ABCD is

10. In the figure below, ABCD is a rhombus. The measure of angle A is 150°. Draw the diagonals so that they intersect at E. The shorter diagonal measures 10.



a. What is the measure of angle DEC?

b. What is the length of the sides of the rhombus to the nearest integer?

c. What is the length of the longer diagonal to the nearest integer?

d. Using your answer from part c and the given diagonal length of 10, find the area of the rhombus.

Answer

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Roberts

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