WORLD BOOK
Building Blocks of Math

Name:_____
Date:_____
Class:_____

Missing sails

Early sailboats used sails that were square in shape. About two thousand years ago, shipbuilders began to use triangular sails. The sailors were able to move the sails to catch the winds in different ways, allowing boats to sail either into the wind or with the wind.

These sailing vessels are missing their sails. Draw a sail for each boat using the angle or side measurements given. Answer the question for each sail.

1. angles: 100°, 40°, 40°
   What kind of a triangle is it?
   _____

2. angles: 90°, 45°, 45°
   What kind of a triangle is it?
   _____

3. sides a and b = 3.5 cm each
   three 60° angles
   What is the length of side c?
   _____

4. angles: 90°, 65°, 25°
   What kind of a triangle is it?
   _____

5. angles: 60°, 60°, 60°
   What kind of a triangle is it?
   _____

6. side a = 3 cm
   side b = 4 cm
   angle between a and b = 90°
   What is the length of side c?
   _____

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Name:_____
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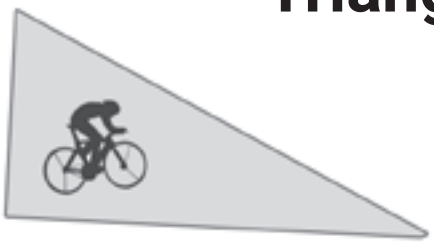
Triangular Trails



It seems that all the bike races in this county follow triangular paths!

Construct triangular bike paths with the characteristics shown for each one. If the characteristics do not allow the construction of a triangle, write "not possible."

Path 1
- base = 8 cm
- height of triangle = 2 cm
- no equal sides

What kind of a triangle is it?

Path 2
- scalene triangle
- base = 5.5 cm
- perimeter < 15 cm

What are the approximate angle measurements?

Path 3
- side a = 4 cm
- side b = 3 cm
- right angle between a and b

If the drawing is a 1 cm = 1 km model, what is the approximate trail length?

Path 4
- side a = 4 cm
- side b = 3 cm
- side c = 5 cm
- 45º angle between a and b

What kind of triangle is it?

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