



Name: _____

Date: _____

Theorems Triangle Properties

Solve for x. Show your work.

1. Can a triangle have sides 6, 7, 15?
Why?
2. Can a triangle have sides 9, 11, 14?
Why?
3. In triangle ABC, angle A = 53° , angle B = 57° , angle C = 70° .
Which side is longest?
4. Can a triangle have sides 6, 9, 16?
Why?
5. A triangle has base 16 and area 63.
Find the altitude to that base.
6. In triangle ABC, angle A = 54° , angle B = 66° , angle C = 60° .
Which side is longest?
7. Can a triangle have sides 9, 12, 12?
Why?
8. A triangle has base 11 and area 72.
Find the altitude to that base.



Theorems Triangle Properties – Answer Key

1. Can a triangle have sides 6, 7, 15?
Why?
2. Can a triangle have sides 9, 11, 14?
Why?
3. In triangle ABC, angle A = 53° , angle B = 57° , angle C = 70° .
Which side is longest?
AB (opposite C)
4. Can a triangle have sides 6, 9, 16?
Why?
5. A triangle has base 16 and area 63.
Find the altitude to that base.
7.875
6. In triangle ABC, angle A = 54° , angle B = 66° , angle C = 60° .
Which side is longest?
AC (opposite B)
7. Can a triangle have sides 9, 12, 12?
Why?
8. A triangle has base 11 and area 72.
Find the altitude to that base.
13.090909090909092