Name:

# Solving Applied Problems

The perimeter of a triangle is 75 feet. Side two is 15 ft more than side one. Side three is 20 feet less than twice the length of side one. What is the length of each side?

Draw a picture.

Answer:

A triangle has three angles, A, B, and C. Angle A and B have the same measurement. Angle C is twice the measurement of angle A. What are the measurements of angle A, B, and C?

Draw a picture.

Answer:

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The perimeter of a triangle is 75 feet. Side two is 15 ft more than side one. Side three is 20 feet less than twice the length of side one. What is the length of each side?

Answer:

Side one = x
Side two = x + 15
Side three = 2x - 20

Perimeter = side 1 + side 2 + side 3
75 = (x) + (x + 15) + (2x - 20)
75 = 4x -5
80 = 4x
20 = x

Side one = 20
Side two = 20 + 15 = 35
Side three = 2(20) - 20 = 40 -20 = 20

Check: 20 + 35 + 20 = 75

A triangle has three angles, A, B, and C. Angle A and B have the same measurement. Angle C is twice the measurement of angle A. What are the measurements of angle A, B, and C?

Answer:

Angle A = x
Angle B = x
Angle C = 2x

Total = angle A + angle B + angle C
180 = x + x + 2x
180 = 4x
45 = x

Angle A = 45
Angle B = 45
Angle C = 2(45) = 90

Check: 45 + 45 + 90 = 180