

ACTIVITY

57. The sides of a triangle are 6.5 cm, 10 cm, and k cm. We know that k is a whole number.

- Could k cm be the length of the shortest side of the triangle? If so, what are all the possible numbers that k could be?
- Could k cm be the length of the longest side of the triangle? If so, what are all the possible numbers that k could be?
- Could k cm be the length of the middle-sized side of the triangle? If so, what are all the possible numbers that k could be?
- Could two of the sides of the triangle have the same length? If so, what would k be?

Hint for parts a–d: Cut out thin strips of paper which have lengths of 6.5 cm and 10 cm. Use a push-pin to connect the strips at an end-point of each of them.

Rotate the sides into different positions, and notice how long the third side would be for various positions. (See pictures below.)

