



Problem of the Week

Problem B and Solution

Draw Me!

Problem

Using a protractor and a ruler, follow the instructions below to draw three different shapes.

(a) Steps for drawing Shape 1:

- Draw a horizontal line segment AB of length 4 cm.
- From B , draw line segment BC of length 8 cm at an angle of 32° to AB .
- Draw a line segment connecting C and A .

What is the measure of angle ACB in your shape?

What kind of triangle did you draw?

(b) Steps for drawing Shape 2:

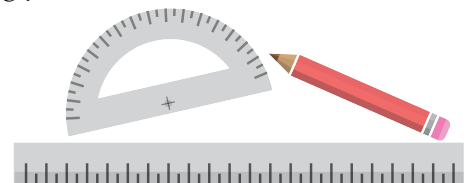
- Draw a horizontal line segment AB of length 6 cm.
- From B , draw line segment BC of length 7 cm at an angle of 135° to AB .
- From C , draw line segment CD of length 6 cm at an angle of 45° to BC , parallel to AB .
- Draw a line segment connecting D and A .

What shape did you draw?

(c) Steps for drawing Shape 3:

- Draw a vertical line segment AB of length 5 cm.
- From B , draw line segment BC of length 5 cm at an angle of 90° to AB .
- Draw line segment AD of length 7 cm, parallel to BC .
- Draw a line segment connecting D and C .

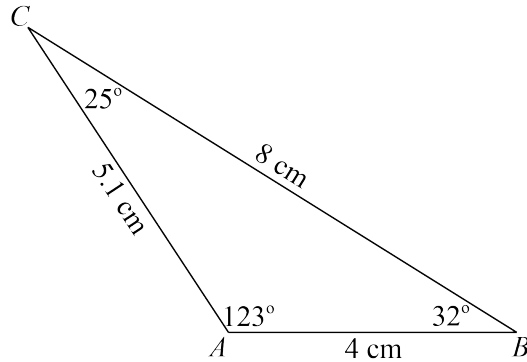
What shape did you draw?



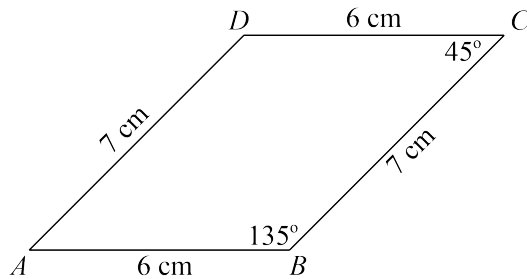


Solution

- (a) Following the steps for Shape 1 creates a scalene triangle. The measure of angle ACB is 25° .



- (b) Following the steps for Shape 2 creates a parallelogram, which is a quadrilateral with two pairs of parallel sides.



- (c) Following the steps for Shape 3 creates a trapezoid, which is a quadrilateral with one pair of parallel sides. (Note : The shape could also be called a right trapezoid, which is a trapezoid with two right angles.)

