



Test in/ Examen de : .....

Name/Le nom : .....

Class/ La Classe: .....

Time / La durée : .....

Date / La date: .....

4) a)  $BC = \sqrt{(y_C - y_B)^2 + (x_C - x_B)^2}$  1/4 formula.

$$= \sqrt{(-3 - 0)^2 + (4 + 3)^2}$$

$$= \sqrt{3^2 + 7^2}$$

$$= \sqrt{9 + 49}$$

$BC = \sqrt{58} \text{ cm}$

1/4

b) K is the midpoint of [AB]

$$x_K = \frac{x_A + x_B}{2}$$

$$y_K = \frac{y_A + y_B}{2}$$

$$= \frac{1 + 3}{2}$$

$$y_K = \frac{4 + 0}{2}$$

$$x_K = -1$$

$$y_K = 2$$

$K(-1, 2)$

Not necessary

1/4 The triangle ABC is isosceles at C for having 2 equal sides. (CA = CB =  $\sqrt{58}$  cm proved)

and [CK] is the median relative to the base [AB] (since K is the midpoint of [AB])

1/4 Thus [CK] is the perpendicular bisector of [AB] or height rule the median (Rule)

Therefore BKC is right at K so it is inscribed in a circle whose diameter is [BC] 1/4

thus [BC] is the diameter of (C) and S is its midpoint

$$x_S = \frac{x_B + x_C}{2}$$

$$y_S = \frac{y_B + y_C}{2}$$

and radius =  $\frac{BC}{2}$

$$= \frac{-3 + 4}{2}$$

$$= \frac{0 + (-3)}{2}$$

1/4

$$x_S = \frac{1}{2}$$

$$y_S = -1.5$$

$S(\frac{1}{2}, -\frac{3}{2})$

cm

rule  
we give it  
extra

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