

2) Roots of $P(x)$ means $P(x) = 0$
 Since $P(x) \equiv Q(x)$ ~~is~~ $(x+3)^2 - 25 = 0$
 $(x+3+5)(x+3-5) = 0$
 $(x+8)(x-2) = 0$

$x = -8$ or $x = 2$

$P(x)$ admit 2 distinct roots $x \in \{-8, 2\}$.

Roots are the values of the variable that make the expression = 0.

$P(2) = (2+3)^2 - 25$
 $= 25 - 25$
 $= 0$

$P(-8) = (-8+3)^2 - 25$
 $= 25 - 25$
 $= 0$

Part B:

1) Area of $\triangle ABC = \frac{\text{height} \times \text{base}}{2}$

$= \frac{AH \times BC}{2}$

$A = \frac{x^2 + 6x}{2} \text{ cm}^2$

~~xxxxxxxxxxxx~~ ~~dy~~ ~~dy~~ ~~xxxxxx~~ ~~xxxxxx~~

2) $A(x) = 8$

$\frac{x^2 + 6x}{2} = 8$

$x^2 + 6x = 16$

$x^2 + 6x - 16 = 0$

$(x+8)(x-2) = 0$

$x = -8$ or $x = 2$

rejected

accepted

length can't be negative

P. 3. ~~xxxxxxxxxxxx~~