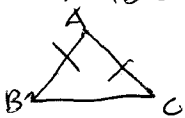


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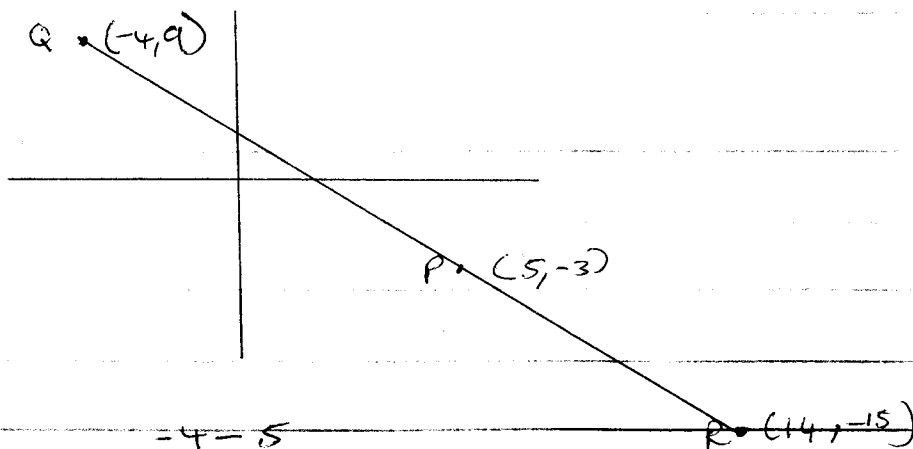
1) If $\triangle ABC$ is isosceles, $\overline{AB} = \overline{AC}$.

$$\overline{AB} = \sqrt{(-2-6)^2 + (1+5)^2} = \sqrt{100} = 10$$

$$\overline{BC} = \sqrt{(0-2)^2 + (3-1)^2} = \sqrt{8}$$

$$\overline{AC} = \sqrt{(0-6)^2 + (3-(-5))^2} = \sqrt{100} = 10$$

$\overline{AB} = \overline{AC}$, therefore $\triangle ABC$ is isosceles



$$(a) \frac{QP}{QR} = \frac{-4-5}{5-14} = \frac{-9}{-9} = 1:1$$

$$(b) \frac{RQ}{RP} = \frac{14+4}{14-5} = \frac{18}{9} = 2:1$$