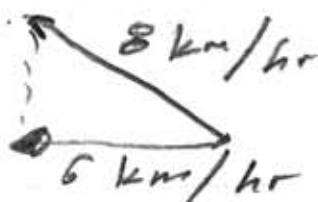
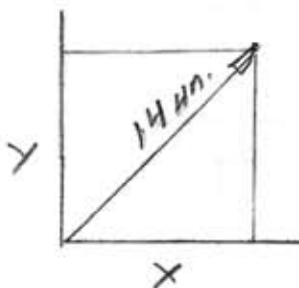


To go straight across, the boat needs an upstream component of 6 km/hr.



39.



14 units @ 45°

so, $x = y$

SINCE $14 = \sqrt{x^2 + y^2}$

$$x, y \approx 10 \text{ UNITS}$$

(See Sneeze in Prob 37)

DONE ALGEBRAICLY:

$$R = \sqrt{x^2 + y^2}$$

$$14 = \sqrt{x^2 + y^2}$$

$$x = y$$

$$14 = \sqrt{2x^2} \quad (\text{SUBSTITUTE + COMBINE})$$

$$14^2 = 2x^2$$

$$\frac{14^2}{2} = x^2$$

$$x = \sqrt{\frac{14^2}{2}}$$

$$x = 9.899 \text{ or } \approx 10 \text{ UNITS}$$