

## SAMPLE PAPER 5: PAPER 2

### QUESTION 6 (25 MARKS)

#### Question 6 (a)

$$k = \frac{|EA|}{|BA|} = \frac{1.5 + 4.5}{1.5} = \frac{6}{1.5} = 4$$

#### Question 6 (b)

$$|AF|^2 = 8^2 + 6^2$$

$$\therefore |AF| = 10$$

$$k = \frac{|AF|}{|AC|} \Rightarrow 4 = \frac{10}{|AC|}$$

$$\therefore |AC| = \frac{10}{4} = 2.5$$

$$|BC| = \sqrt{2.5^2 - 1.5^2} = 2$$

$$\text{Area of triangle } ABC: A = \frac{1}{2} \times 1.5 \times 2 = 1.5$$

#### Question 6 (c)

$$\frac{1}{2} \times |AC| \times |BD| = 1.5$$

$$\frac{1}{2} \times 2.5 \times |BD| = 1.5$$

$$\therefore |BD| = \frac{3}{2.5} = 1.2$$

$$|AD| = \sqrt{1.5^2 - 1.2^2} = 0.9$$


---

