

- ④ let present age of first friend =  $x$  years  
 present age of second friend =  $(20-x)$  years  
 acc to ques.

$$(x-4)(20-x-4) = 48$$

$$\Rightarrow (x-4)(16-x) = 48$$

$$\Rightarrow -x^2 + 20x - 112 = 0$$

$$\Rightarrow x^2 - 20x + 112 = 0$$

$$a = 1, b = -20, c = 112$$

$$D = b^2 - 4ac$$

$$= (-20)^2 - 4 \times 1 \times 112$$

$$= 400 - 448$$

$$= -48$$

$\therefore D < 0$ . This situation is not possible

- ⑤ let length =  $x$  m

$$\text{Perimeter} = 80 \text{ m}$$

$$2(l+b) = 80 \quad 40$$

$$x + b = 40$$

$$\Rightarrow b = (40 - x) \text{ m}$$

$$\text{area of rect. field} = 400 \text{ m}^2$$

$$lb = 400$$

$$x(40-x) = 400$$

$$\Rightarrow 40x - x^2 = 400$$

$$\Rightarrow x^2 - 40x + 400 = 0$$

Comparing

$$a = 1, b = -40, c = 400$$

$$D = b^2 - 4ac$$

$$= (-40)^2 - 4 \times 1 \times 400$$

$$= 1600 - 1600$$