



Factorise fully

$$64 - 4x^2 \quad 4(16 - x^2)$$

$$4(4-x)(4+x)$$

Rationalise the denominator of

$$\frac{3}{\sqrt{6}} \times \frac{\sqrt{6}}{\sqrt{6}} = \frac{3\sqrt{6}}{\cancel{6}} = \frac{\sqrt{6}}{2}$$

In a netball league there are 14 teams.
Each team plays each other team once.

Work out the total number of matches played.

$$13 + 12 + 11 + 10 + 9 + 8 + 7$$

$$+ 6 + 5 + 4 + 3 + 2 + 1$$

$$= 91$$

The cost of a mobile phone is x pounds
The cost of a television is y pounds

When both prices are increased by
£40, the ratio for the cost of the mobile
phone to the cost of the television is
15:22

When both prices are decreased by
£100, the ratio for the cost of the
mobile phone to the cost of the
television is 8:15

Find the values of x and y

$$x = \text{£}260 \quad y = \text{£}400$$

$$22(x+40) = 15(y+40)$$

$$22x - 15y = -280 \quad \text{--- (1)}$$

$$15(x-100) = 8(y-100)$$

$$15x - 8y = 700 \quad \text{--- (2)}$$

$$15 \times \text{(1)} \quad 330x - 225y = -4200$$

$$22 \times \text{(2)} \quad 330x - 176y = 15400$$

$$\underline{\hspace{1.5cm}} \quad \underline{\hspace{1.5cm}}$$

$$-49y = -19600$$

$$y = 400$$

$$x = 260$$

subtract