



Solve the simultaneous equations

$$4x + 2y = 14$$

$$x + 2y = 8 \quad \text{sub}$$

$$3x = 6 \quad x = 2$$

$$8 + 2y = 14$$

$$2y = 6$$

$$y = 3$$

$$x = 2, y = 3$$

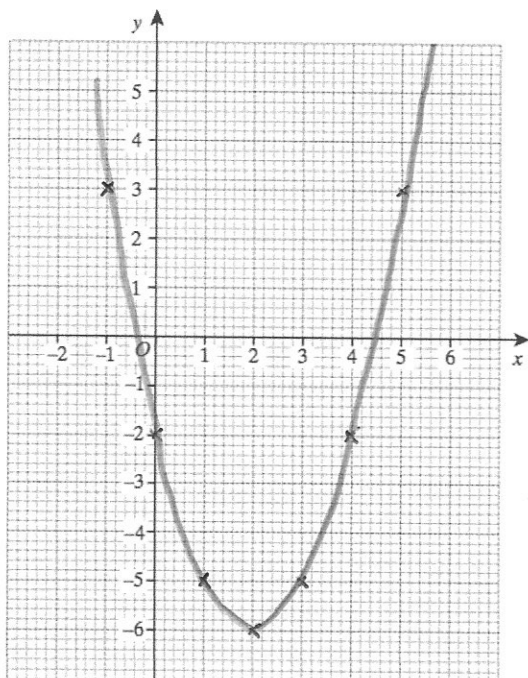
There are 90 cards in a pack.
Each card is red or yellow.
The ratio of the number of red cards to yellow cards is 1:2 $1+2=3$
10 more yellow cards are added to the pack.

$$90 \div 3 = 30$$

30 red 60 yellow \rightarrow 70 yellow

Find the ratio of red cards to yellow cards that are now in the pack.
Give your answer in its simplest form.

$$3:7$$



On the grid, draw the graph of $y = x^2 - 4x - 2$

| | | | | | | | |
|---|----|----|----|----|----|----|---|
| x | -1 | 0 | 1 | 2 | 3 | 4 | 5 |
| y | 3 | -2 | -5 | -6 | -5 | -2 | 3 |

Calculate the volume of the square based pyramid.

$$\frac{1}{3} \times 15^2 \times 11$$

$$825 \text{ cm}^3$$

