Solution of Equations and Graph Sketching 2 - ANSWERS

1 It is the set of all the possible values of the variable. (You might have worded this slightly differently – that's OK if the meaning is the same.)

2 $2 \times \frac{1}{2} \times 2.5 - 0.25 = 2.5 - 0.25 = 2.25$

3 If $v = u + at$

Subtracting u from both sides: $v - u = at$

Dividing both sides by a: $\frac{v-u}{a} = t$

4 $v = \frac{s}{t}$ (or some rearrangement of this e.g. $s = vt$)

5

a. $\frac{x}{4} + 5 = \frac{x}{2}$

Multiplying both sides by 4: $x + 20 = 2x$

Collecting terms (subtracting x from both sides: $20 = x$

b. $\frac{10}{x} - 2 = \frac{4}{x}$

Multiplying both sides by x: $10 - 2x = 4$

Collecting constants on the left and x on the right: $6 = 2x$

Dividing both sides by 2: $3 = x$

c. $\frac{1}{1-x} = 5$

Multiplying both sides by $(1 - x)$: $1 = 5(1 - x))$

Expanding the right hand side: $1 = 5 - 5x$

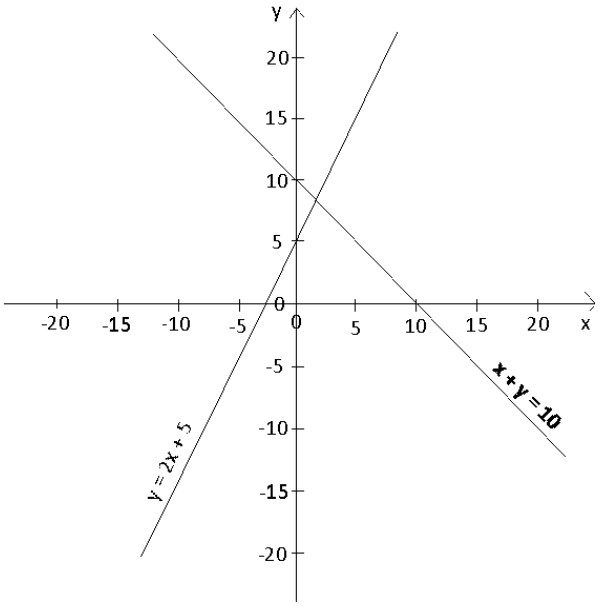
Collecting constants on the left hand side: $-4 = -5x$

Dividing both sides by -5 : $\frac{4}{5} = x$ (or 0.8)

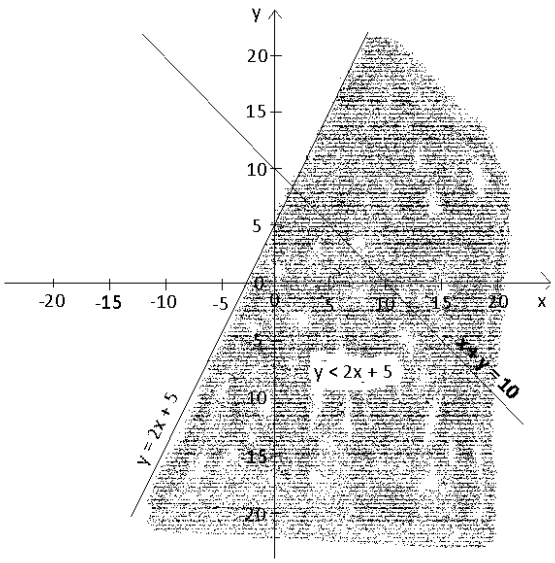
6 Intercepts given by:

a. When $x = 0, y = 5$ and when $y = 0, x = -2.5$

b. When $x = 0, y = 10$ and when $y = 0, x = 10$



7 a)



b)