

## Quiz 2

**Question 1.** (2 marks)Solve for  $b$ :

$$A = \frac{1}{2}h(b+B)$$

$$2A = h(b+B)$$

$$\frac{2A}{h} = b+B$$

$$\boxed{\frac{2A}{h} - B = b}$$

**Question 2.** (3 marks) The <sup>TRIANGLE</sup> perimeter of a rectangle is 110cm. One side is double the second side and the third side is 30cm more than the second. Find the length of each side.

LET  $x$  BE THE SECOND SIDE  
 THEN THE FIRST SIDE IS  $2x$   
 THE THIRD SIDE IS  $x+30$

$$x + 2x + (x+30) = 110$$

$$4x + 30 = 110$$

$$4x = 80$$

$$x = 20$$

∴ THE SIDES ARE 40cm, 20cm AND 50cm

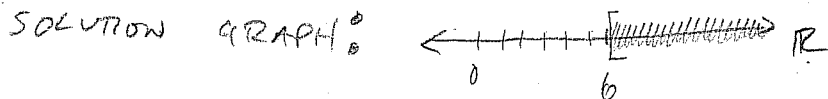
**Question 3.** (5 marks) Solve for  $x$  and give the solution graph and solution set (indicate which is which):

(a)  $2x - 3(x - 4) \geq 4 - 2(x - 7)$

$$2x - 3x + 12 \geq 4 - 2x + 14$$

$$-x + 12 \geq -2x + 18$$

$$x \geq 6$$



SOLUTION SET:  $[6, \infty)$

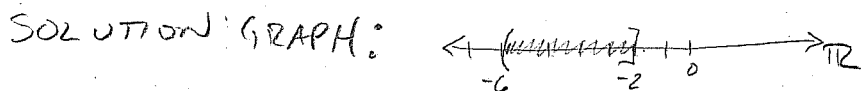
(b)  $8 \leq 3 - \frac{5}{2}x < 18$

$$8 - 3 \leq -\frac{5}{2}x < 18 - 3$$

$$5 \leq -\frac{5}{2}x < 15$$

$$\left(-\frac{2}{5}\right)5 \geq \left(-\frac{2}{5}\right)\left(-\frac{5}{2}x\right) > -\frac{2}{5}(15)$$

$$-2 \geq x > -6$$



SOLUTION SET:  $(-6, -2]$