

1.

$$\sum_{j=y-1}^y 4j = 4$$

$$4(y-1) + 4y = 4$$

$$8y - 4 = 4$$

$$8y = 8$$

Hence $y = 1$

2.

$$\sum_{i=y}^{y+1} 4i = -20$$

$$4y + 4(y+1) = -20$$

$$8y + 4 = -20$$

$$8y = -24$$

Hence $y = -3$

3.

$$\sum_{i=z-1}^{z+1} 4i = 72$$

$$4(z-1) + 4z + 4(z+1) = 72$$

$$12z = 72$$

Hence $z = 6$