

# m3 = 16 days to go!

8 Pupils are asked to investigate the number of electronic devices such as mobile phones, tablets, laptops etc. that people own.

(a) Joanne surveys her classmates and her results are recorded in the frequency table below.

Number of devices	Frequency
0	3
1	5
2	6
3	4
4	5
5	2
6	3

How many?

Big List

0, 0, 0  
 1, 1, 1, 1, 1  
 2, 2, 2, 2, 2, 2  
 3, 3, 3, 3  
 4, 4, 4, 4  
 5, 5  
 6, 6, 6

0  
 5  
 12  
 12  
 20  
 10  
 18

28

Calculate the mean number of devices for Joanne's classmates.

Think about a big list.  
 The frequency table is just a short way of writing the big list of numbers.

$$\text{Mean} = \frac{77}{28}$$

Answer 2.75 [3]

(b) Paula surveys 100 people at random coming out of the Leisure Centre one Saturday morning. She calculates the mean for her results to be 3.4

Whose value should give a better estimate for the mean for the whole population?

Give 2 reasons for your answer.

① Paula would have a better estimate because she asks different ages of people

② Also she asked lots more people [2]

19 (a) Simplify

$$5(t-2) - 3(4-2t)$$

$$5t - 10 - 12 + 6t$$

$$11t - 22$$

$$5(t-2)$$

$$5t - 10$$

use the CLAW

Answer  $\underline{11t - 22}$  [2]

(b) Expand and simplify  $(e+4)(e-7)$ .

2 Brackets

2 Claws

$$(e+4)(e-7)$$

$$\text{FOIL} \\ e^2 - 7e + 4e - 28$$

Answer  $\underline{e - 3e - 28}$  [2]

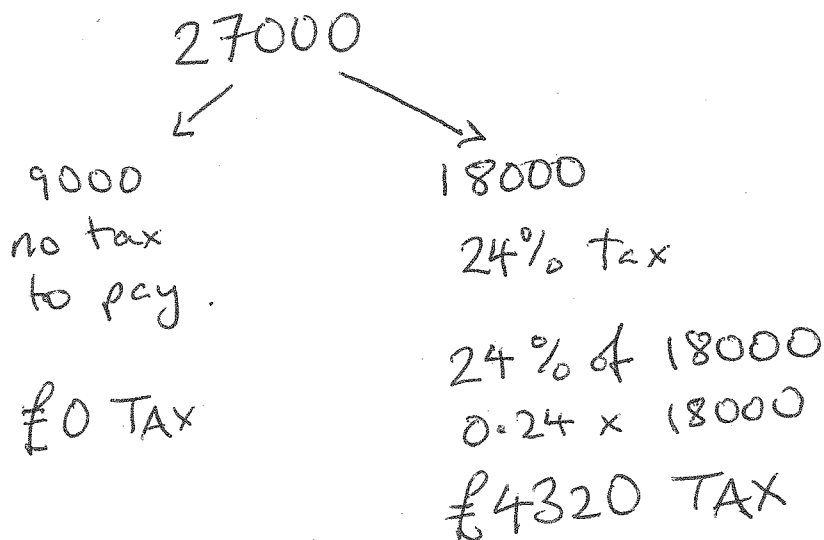
1 Zoe's annual salary is £27 000

Her tax free allowance is £9 000

She pays 24% of the remaining salary in tax.

How much of her salary is left after tax has been deducted?

Show your working clearly.



$$27000 - 4320 = 22680$$

Answer £  $\underline{22680}$  [3]