1) a) Tick the representation which matches the equation $x + 3 = 8$.

A $\boxed{?}$ +1 +1 +1 = +1 +1 +1 +1 / +1 +1 +1 +1

C $\boxed{?}$ +1 +1 +1 = +1 +1 +1 / +1 +1 +1

B $\boxed{?}$ $\boxed{?}$ $\boxed{?}$ = +1 +1 +1 +1 / +1 +1 +1 +1 +1

b) Write down the two equations shown by the other two representations.

_____   _____

c) What is the value of x in each equation?

$x =$ _____ $x =$ _____ $x =$ _____

2) Compare the value of x and y in these equations using <, > and =.
You can draw representations to show your working out.

a) $x + 4 = 16$ $y + 5 = 16$ $x =$ _____ $\Box$ $y =$ _____

b) $x - 5 = 15$ $y - 7 = 14$ $x =$ _____ $\Box$ $y =$ _____

c) $2x = 28$ $3y = 42$ $x =$ _____ $\Box$ $y =$ _____

3) Form equations for the following number riddles and find the value of x in each one.

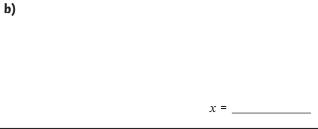**a)** I think of a number and add 127. The answer is 200.

b) I think of a number and subtract 95. The answer is 74.

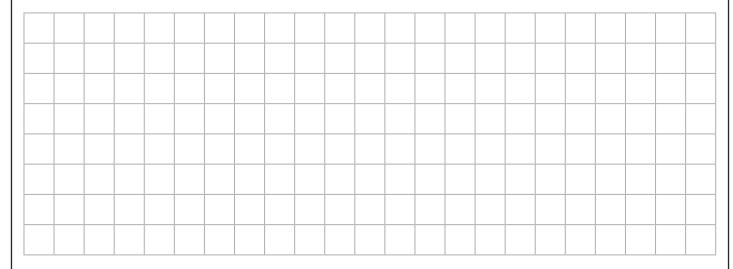**c)** I think of a number and multiply it by 10. The answer is 65.

a)

$x =$ _____

b)

$x =$ _____

c)

$x =$ _____

1) Is the value of the letter x the same in both equations? Prove your answer and explain your reasoning.
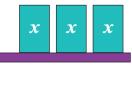
$x + 74.5 = 125$

$4x = 202$

2) a) $x = 15$

I can balance this equation using the expression 11 × 4.

Do you agree with Nishi? Explain your reasoning.

_____

_____

b) Write four different expressions that will balance this equation. Use a different operation each time.

_____   _____

_____   _____

3) Does each bar model match the equation?
Explain your answer.

$3x = 30$

3	x
30	

_____

_____

$30 = x + 15$

x	15
30	

_____

_____

$x + 3 = 30$

x	x	x
30		

_____

_____

1) What could the answer to this equation be? How many possible equations are there?

$$x - 12.5 = \boxed{}$$

The value of x is a two-digit square number.

2) Create ten different equations using any of these digits, letters and symbols. Find the value of x in each equation.

| 8 | = | x | 16 | ÷ | 12 | − | + | 24 | 4 |

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

3) The total height of four sunflowers is 2.35m. Sunflowers A and B are the same height. Find the height of sunflower C.

$x + 25$ A
73cm   B
?   C
$100 - x$ D

C = _____