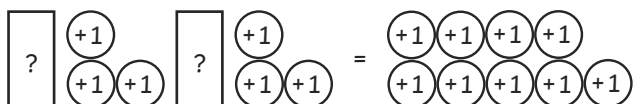
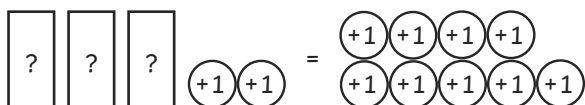
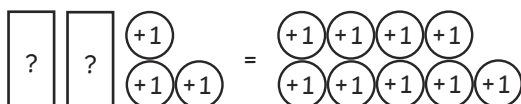




- 1) a) Tick the representation which matches the equation  $2x + 3 = 9$ .



- b) Write down an equation to match each of the other representations.

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

$3x + 4 = 16$

$2y + 4 = 16$

$x \boxed{\phantom{00}} y$

$4x - 5 = 15$

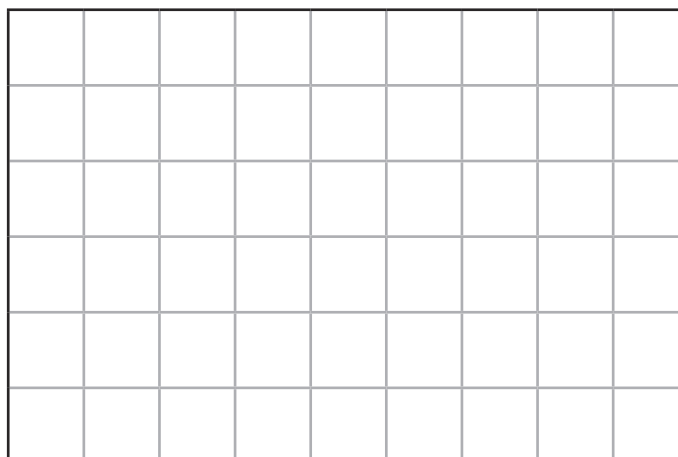
$3y - 5 = 10$

$x \boxed{\phantom{00}} y$

$2(x + 4) = 28$

$3(y + 4) = 27$

$x \boxed{\phantom{00}} y$



- 3) Create three equations where  $x = 3$ , using the numbers and expressions below. Draw representations of your equations.

$x$	$2x$	5	2
1	4	8	10

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- 1) Is the value of the letter  $x$  the same in both equations? Prove your answer using diagrams and explain your reasoning.



$$3(x + 4) = 30$$

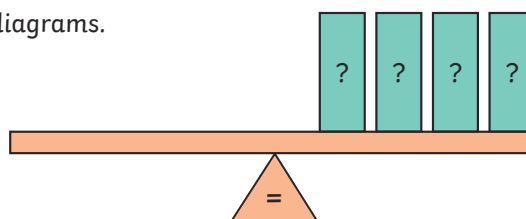
$$3x + 4 = 22$$

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- 2) a) Do you agree with Nishi? Explain your reasoning using diagrams.



If  $x = 4$ , then I can balance this equation using the expression  $10 + 4 + 3$ .



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- b) Write three different expressions that will balance this equation.

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- 3) a) Do the operations correctly show how to use inverse operations to find the value of  $x$ ? Explain your reasoning.

$$7(x - 2) = 42$$

$$(x - 2) = 6$$

$$x = 4$$

$\div 7$

$- 2$

- b) Complete the inverse operations to find the value of  $x$ .

$$8(x + 3) = 96$$


$$(x + 3) = 12$$

$$x =$$

$$15x + 4 = 34 \text{ where } x = 2$$

[illegible]

- $$3x + \boxed{\phantom{000}} = \boxed{\phantom{000}}$$

[illegible]

- A



$$\overline{5x + 4}$$

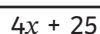


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34cm



11

[illegible]