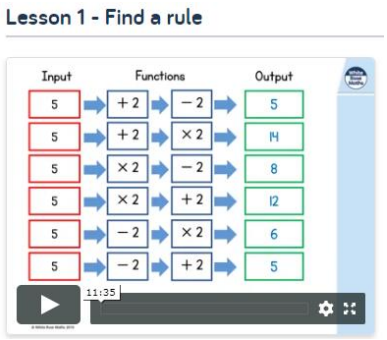
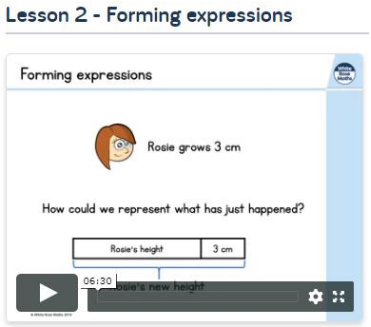
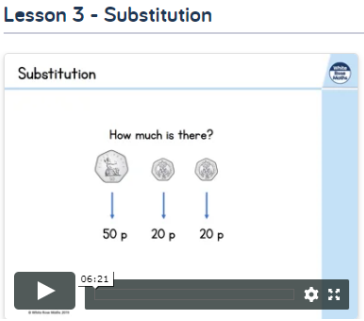
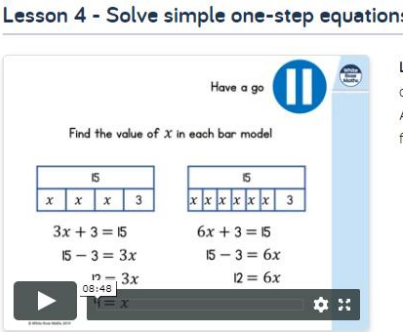
Maths Planning and Ideas

Week Commencing: 15.06.20

Year Group: Year 6

This week, we are going to be revisiting some of the key learning that the children will need as they prepare for their next year of schooling. This may mean that they are consolidating learning that they already understand or are perhaps having another go at some of the trickier topics. The subject areas may also jump around a little but this sequence of lessons has been put together in order to support our oldest children as much as possible before they head to secondary school.

	Monday	Tuesday	Wednesday	Thursday	Friday
Area of Learning	**Arithmetic** LC: Can you review your arithmetic understanding?	LC: Can you identify the rule?	LC: Can you form an expression?	LC: Can you calculate missing numbers using algebra?	LC: Can you solve simple one-step equations?
		For these lessons, we will be using the Home Learning Section of the White Rose Maths Scheme and website: *https://whiterosemaths.com/homelearning/year-6/* *Each day there will be a short video to watch and activities to complete, which will be provided below. The dates of these lessons may not match the date that chn are completing the work so please check to make sure that you have selected the correct lesson, shown in* ***green*** *on this plan.* **Please note that for this week, activities will be from the wb 08.06.20 on the White Rose website, as we are revisiting some key areas of learning.** *Any problems, just let Mrs Shepherd know!*			
Activity	Starter: Complete the 10 mental maths questions for Monday (provided below)	Starter: Complete the 10 mental maths questions for Tuesday (provided below) **Main Activity**	Starter: Complete the 10 mental maths questions for Wednesday (provided below) **Main Activity**	Starter: Complete the 10 mental maths questions for Thursday (provided below) **Main Activity**	Starter: Complete the 10 mental maths questions for Friday (provided below) **Main Activity**

	Main Activity KEEP GOING YEAR 6! I know that we are doing a lot of arithmetic work at the moment but trust us, it will help you so much as you move onto secondary school! **Independent Activity** Complete the arithmetic test linked below: https://myminimaths.co.uk/year-6-arithmetic-practice-papers/ Please complete **Paper 5**. You should aim to give yourself between 35-40mins to complete the paper. The answers are also provided so that you can mark your work…but no sneak peaks beforehand please! ☺	Watch the video for **Summer Term Week 7 (wb 08.06.20) – Lesson 1** to work out the operations and functions used to change your starting number:  **Independent Activity** Today's work might seem simple but by recapping function machines and working out how a number has been changed, you will find the later work on algebra and equations much easier. This is also an area that you will focus on during Year 7 so this is a great way to get you started. Identifying the functions used to change a number often relies on a solid recall of number facts. This would be a good opportunity to revisit Times Tables Rock Stars if you haven't already: https://ttrockstars.com/	Watch the video for **Summer Term Week 7 (wb 08.06.20) – Lesson 2** to show you how to use letters to form algebraic expressions:  **Independent Activity** Back in the classroom, we had only just started to look at algebra but most of you showed a really good understanding. Remember, letters are used to represent a hidden or missing number and 'working backwards' through a problem often helps! Have a go at the questions below – some will be harder than others.	Watch the video for **Summer Term Week 7 (wb 08.06.20) – Lesson 3** to help calculate missing numbers that have been substituted with letters:  **Independent Activity** This is very similar to yesterday's work but this time, there is more focus on calculating the missing numbers that are represented by a letter. E.g. 2x + 3 = 11 Work backwards and take off the 3 so 2x = 8 If there are 2 lots of x that must mean that 2 lots of 4 give you 8. So x = 4. Have a go at the questions below – some will be harder than others.	Watch the video for **Summer Term Week 7 (wb 08.06.20) – Lesson 4** to link this week's work to problem solving:  **Independent Activity** Having looked at algebra in more detail, it is now time to put it all to good use. These one-step problems use letters and expressions to pose simple problems. Have a go at the questions below – some will be harder than others.

		Have a go at the questions below – some will be harder than others.			

Starter Activities

Monday	Tuesday	Wednesday	Thursday	Friday
1. 12.4 + 6.03	11. 19.54 + 10.03	21. 71.18 + 3.691	31. 229.8 + 45.01	41. 623.3 + 0.09
2. 13 x ? = 143	12. 27 x ? = 216	22. 48 x ? = 336	32. 76 x ? = 684	42. 35 x ? = 420
3. 7.2 x 100	13. 4.1 x 10	23. 9.6 x 1000	33. 2.2 x 10	43. 0.7 x 100
4. Which is bigger - 0.45 or 35%?	14. Which is bigger - 2% or 0.2?	24. Which is bigger - 71% or 0.701?	34. Which is bigger - 0.45 or 4.5%?	44. Which is bigger - 91% or 0.91?
5. Find 1/6 of 24	15. Find 1/8 of 96	25. Find 2/3 of 21	35. Find 4/5 of 45	45. Find 5/6 of 30
6. Write 0.54 as a fraction	16. Write 0.05 as a fraction	26. Write 0.67 as a fraction	36. Write 0.83 as a fraction	46. Write 0.09 as a fraction
7. £4.23+ 86p	17. £2.99 + 98p	27. £25.78 + 58p	37. £0.61 + 205p	47. £0.84 + 317p
8. 8°C warmer than 3°C	18. 12°C warmer than 2°C	28. 7°C warmer than –3°C	38. 5°C warmer than –2°C	48. 6°C warmer than –15°C
9. Difference between 58 and 27	19. Difference between 109 and 32	29. Difference between 325 and 171	39. Difference between 980 and 450	49. Difference between 712 and 699
10. 1800 ÷ 300	20. 1500 ÷ 300	30. 2700 ÷ 300	40. 3300 ÷ 300	50. 2400÷ 300

If you cannot print off these questions, please don't worry – simply have a go at writing the calculations and answers in your book or on a piece of paper!

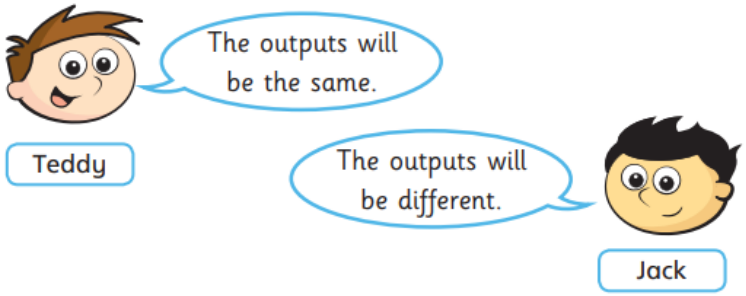
Monday 15.06.20 **Arithmetic Paper available to download using link provided**

Tuesday 16.06.20

1 Use the function machine to complete the table.

Input	1	2	3	5	10	50
Output						

2 Here is the same function machine with the steps in the reverse order.



Explain to a partner who you think is correct.

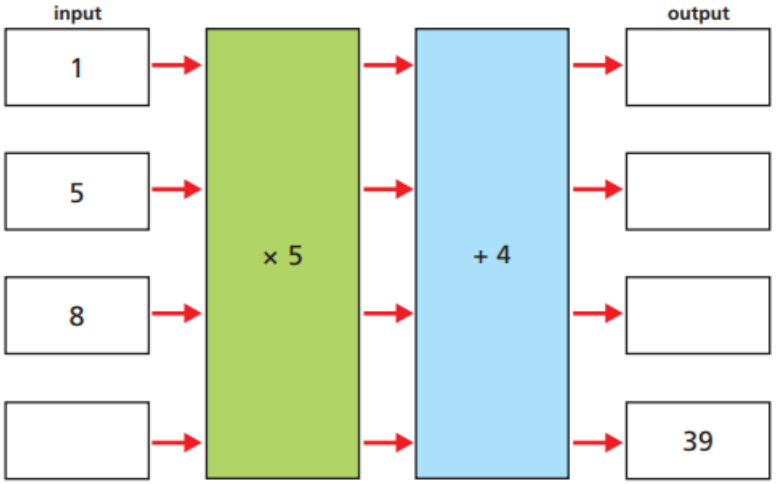
Use the function machine to complete the table.

Input	1	2	3	5	10	50
Output						

Who is correct? _____

3 Work out the missing outputs and inputs.

a)



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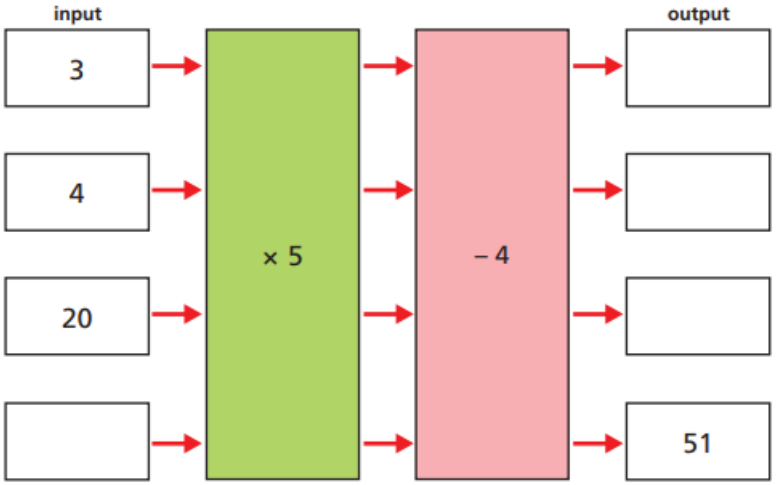
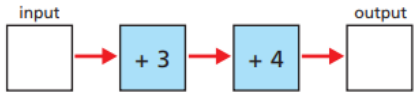


4 Tick the pairs of function machines that will give the same outputs for a given input.

a)



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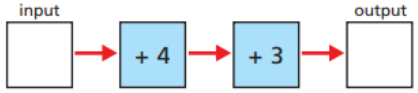

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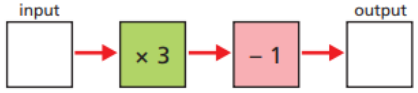

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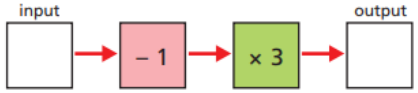

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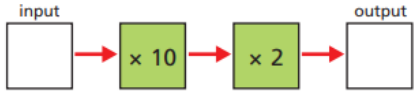

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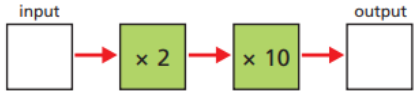


6 Here is a function machine.

a) Complete the table.

Input	10	3		
Output			40	280

b) Rosie puts a number into the machine and she gets out the same number.

Work out Rosie's number.

7 Mr Hall and Mrs Rose order some photos online.

a) Mr Hall orders 16 photos.

How much does he pay?

b) Mrs Rose pays £6.05

How many photos did she order?

Wednesday 17.06.20

1 Tommy uses multilink cubes to represent an unknown number and base ten ones to represent 1

 = x  = 1

Write algebraic expressions to describe the sets of cubes.

The first one has been done for you.

a)  $2x + 3$

b)  _____

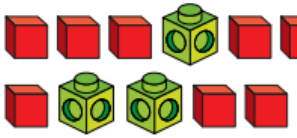
c)  _____

d)  _____

e)  _____

f)  _____

g)  _____

h)  _____

2 Use Tommy's method to represent these expressions.

a) $x + 2$ **c)** $3x + 1$

b) $2x$ **d)** $x + 6$

Compare answers with a partner.

3 Use cubes to help you simplify the following expressions.

The first one has been done for you.

a) $2y + 5 + y$

 $3y + 5$

b) $3a + 2 + a + a$

 _____

c) $6p + 2 - 2p$

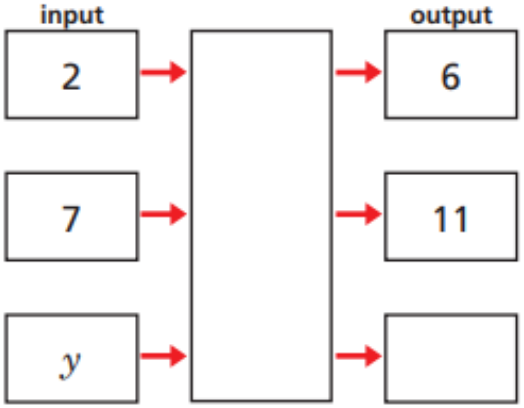
 _____

d) $m + 4 + 3m - 3$

_____

4 Complete the function machines.

a)



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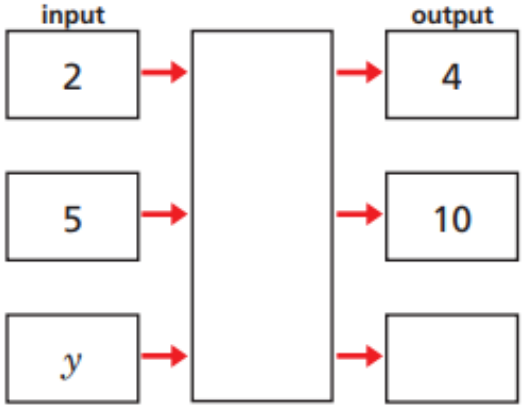

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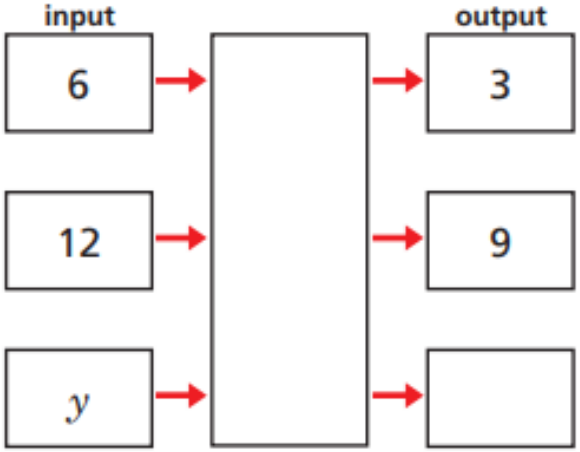
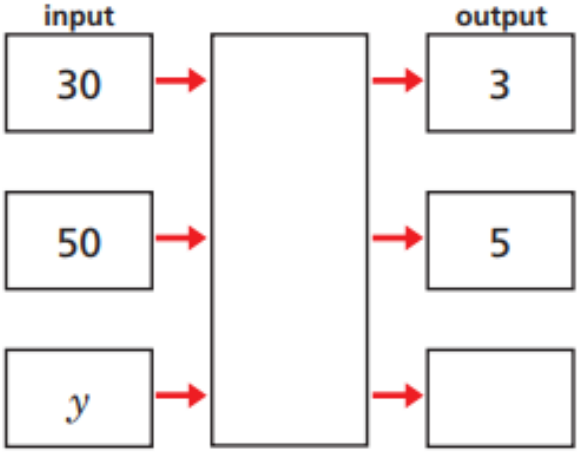


d)



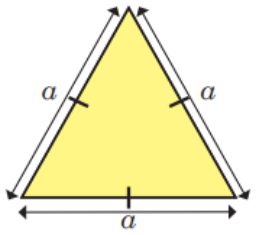
5 Match each statement to the equivalent algebraic expression.

Write the missing statements.

5 more than y	$2y$
y less than 5	$y - 5$
y multiplied by 5	$5 - y$
y divided by 5	$y + 5$
double y	$5y$
	y^2
	$\frac{y}{5}$

6 Write an algebraic expression to represent the perimeter of each shape.

a)



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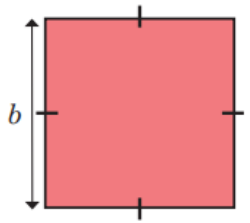

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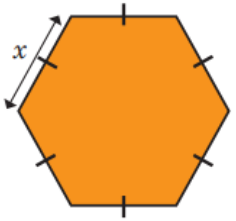
c)



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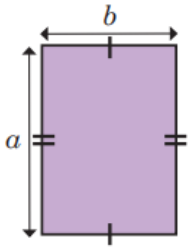
d)



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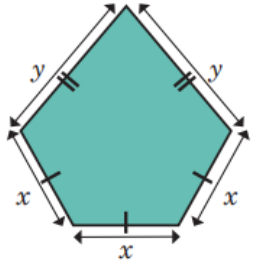
e)



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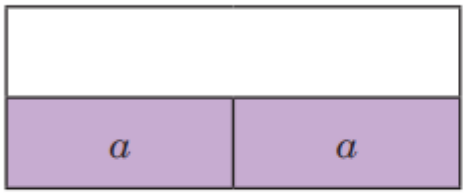
7 Complete the bar models.

a)



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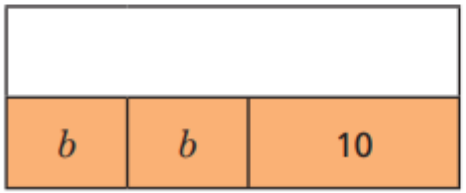

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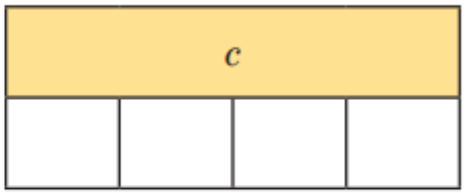

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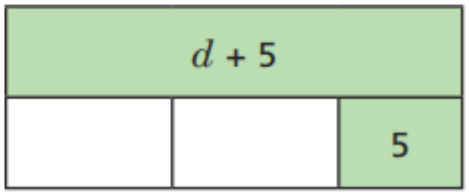
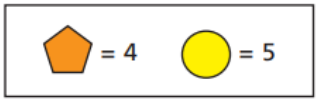


Thursday 18.06.20

1



Use the given facts to work out the calculations.

a) 

b) 

c) 

2

Use the given facts to work out the calculations.

a) 

b) 

c) Create your own calculation that will be equal to 22

3 If $x = 5$, write the values of the expressions in the corresponding grid.

The first one has been done for you.

$3x$	x^2	$2x - 5$
$4x + 2$	$\frac{x}{2}$	$2(x + 1)$
$7x$	$x + 9$	$x - 7$

15		

4 If $a = 10$ and $b = 6$, work out the values of the expressions.

a) $a + b =$ ☐

b) $a - b =$ ☐

c) $2a =$ ☐

d) $2a + b =$ ☐

e) $3a - 17 =$ ☐

f) $2(a - b) =$ ☐

6

Mo

It does not matter what p and q are, $p + q$ and $q + p$ will always give the same answer.

Do you agree with Mo? _____

Explain your answer.

_____

_____

_____

7

$m = 7 \quad n = 5$

Write >, < or = to compare the expressions.

a) $2m$ ◯ 10

b) $n - 1$ ◯ 5

c) $2n + m$ ◯ $2m + n$

d) $7n$ ◯ $5m$

8

$a = 10$

Write the expressions in order, starting with the smallest value.

$5a$	$a + 5$	$\frac{a}{5}$	a^2

9

$a = 15$

Write three different algebraic expressions that give a value of 40

_____ _____ _____

10 Complete the table.

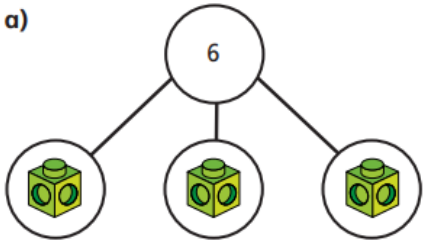
x	$5x$	$5x - 1$
2		
10		
12		
	25	
		34
		99

Friday 19.06.20

1 Write an equation for each part-whole model.

Work out the value of the multilink cube in each equation.

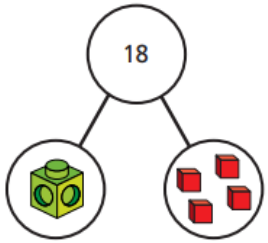
a)



_____

= ☐

b)



_____

= ☐

2 There are some counters under the cup.

There are 10 counters in total.

a) If c is the number of counters under the cup, explain why $c + 6 = 10$

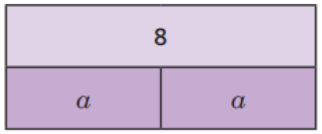
b) Work out the value of c. $c =$ ☐

c) How many counters are under the cup? ☐

3 Write algebraic equations to represent the bar models.

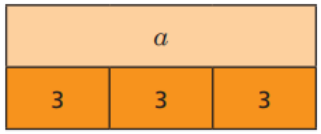
Find the value of a in each one.

a)



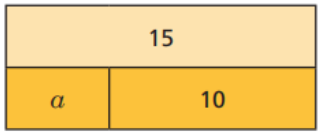
$a =$ ☐

c)



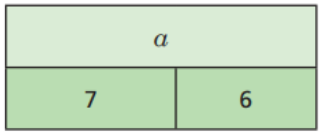
$a =$ ☐

b)



$a =$ ☐

d)



$a =$ ☐

4 Nijah is solving the equation $x - 8 = 20$

$x - 8 = 20$

$x = 20 - 8$

$x = 12$

What mistake has Nijah made?

_____

5 Solve the equations.

a) $x + 7 = 20$

$x =$ ☐

b) $10y = 80$

$y =$ ☐

c) $4m = 22$

$m =$ ☐

d) $g - 3 = 15$

$g =$ ☐

e) $32 = t - 5$

$t =$ ☐

f) $\frac{u}{6} = 3$

$u =$ ☐

6 Filip thinks of a number.

He subtracts 5 from his number.

He ends up with 10

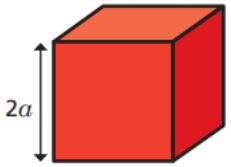
Write an algebraic equation to represent Filip's problem.

Solve the equation to work out his number.

7 Dexter builds a tower.

Each block is $2a$ high.

He uses 7 blocks.



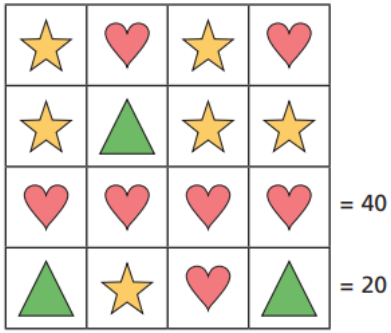
The total height of his tower is 42 cm.

Write an equation to represent the height of Dexter's tower and find the value of a.

$a =$ ☐ cm

8 Work out the value of each shape.

Write the equations that you solved to find the value of each shape.



♥ = ☐ ★ = ☐ ▲ = ☐

Work out the missing total of each row and column.

Where can I complete further work?

Twinkl – Subscription service used by schools is offering a free premium service for teachers, parents and children to use whilst schools are closed. Enter the code **UKTWINKLHELPS** for access to worksheets, powerpoints and interactive games to support all areas of learning.

Classroom Secrets – Free Maths, Reading and Grammar home learning packs and interactive resources for all ages.

White Rose Maths – Free Maths home learning resources for all ages. Watch the videos and try the questions.

Primary Stars – Free Maths home learning packs for Year 1 and 2.

BBC Bitesize Primary – Free learning resources available for KS1 and KS2 across all subjects.

I See Maths – Free daily home maths lessons hosted by Gareth Metcalfe. Follow the link for videos, information and resources.

Top Marks – Free educational resources and games for English and Maths.

ICT Games – Free educational resources and games for English and Maths.