

AcadeMir Preparatory Academy



Summer Packet



2017 - 2018
Fourth Grade

Name:



AcadeMir Families,

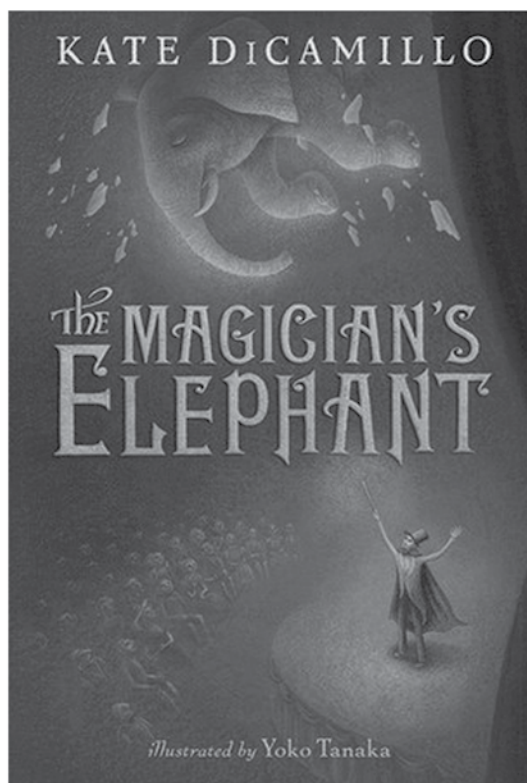
Welcome to AcadeMir Preparatory Academy! Summer is a great time to relax, but it is also time to read and practice your skills in order to be prepared for the upcoming school year. We have prepared a standards-based summer packet with Language Arts and Math activities to support in the summer learning and increase critical thinking. The packet will be graded and a test administered on the reading assignment. Summer packets are **MANDATORY** and due the second week of school to your teacher.

If you have any questions, please contact Mrs. Escobar (305) 967-8492 or via email ddescobar@dadeschools.net.

May you have a restful, relaxing, enjoyable and fun-filled summer!

Sincerely,

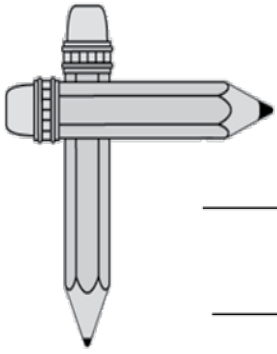
Mrs. K. Rodriguez, Ed., S.
Principal



Title: The Magician's Elephant

Author: Kate DiCamillo

When a fortuneteller's tent appears in the market square of the city of Baltese, orphan Peter Augustus Duchene knows the questions that he needs to ask: Does his sister still live? And if so, how can he find her? The fortuneteller's mysterious answer (an elephant! An elephant will lead him there!) sets off a chain of events so remarkable, so impossible, that you will hardly dare to believe it's true.



Entering Fourth Grade: *The Magician's Elephant*

Name of Book

Author

Student Name

Describe the main characters using specific details from the story?

When and where does the story take place? Over the course of the Day? A month? A year? How do you know? Reference details from the story to support your answer.



Summarize the story making sure to highlight the most important parts.

What is the conflict in the story and how is it solved?

After reading the story, do you believe that it is better to know what will happen in the future or would you rather not know and let things happen? Explain the reasons behind your answer.



Addition mental strategies – look for patterns

Number patterns are useful. You can build on basic addition facts.

1 Add 10 each time:

a

10			
----	--	--	--

b

15			
----	--	--	--

c

7			
---	--	--	--

2 Add 100 each time:

a

10			
----	--	--	--

b

15			
----	--	--	--

c

7			
---	--	--	--

3 Use patterns to complete this addition table:

a

$3 + 5 =$	$30 + 50 =$	$300 + 500 =$
-----------	-------------	---------------

b

$6 + 2 =$	$60 + 20 =$	$600 + 200 =$
-----------	-------------	---------------

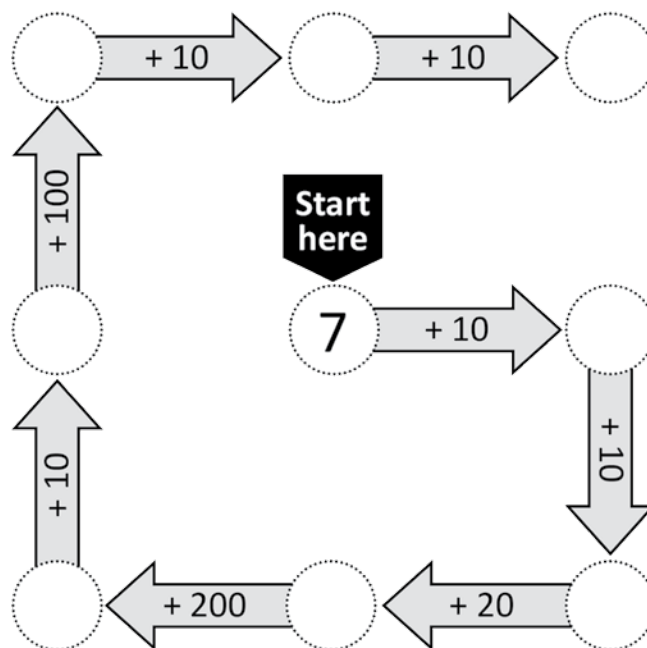
c

$4 + 1 =$	$40 + 10 =$	$400 + 100 =$
-----------	-------------	---------------

d

$7 + 3 =$	$70 + 30 =$	$700 + 300 =$
-----------	-------------	---------------

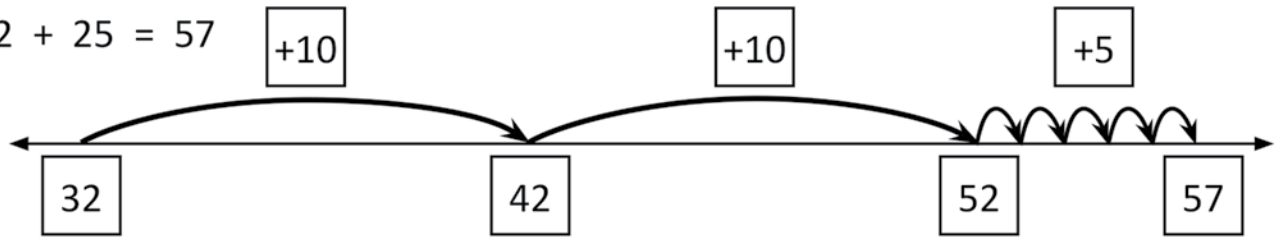
4 Complete this addition trail:



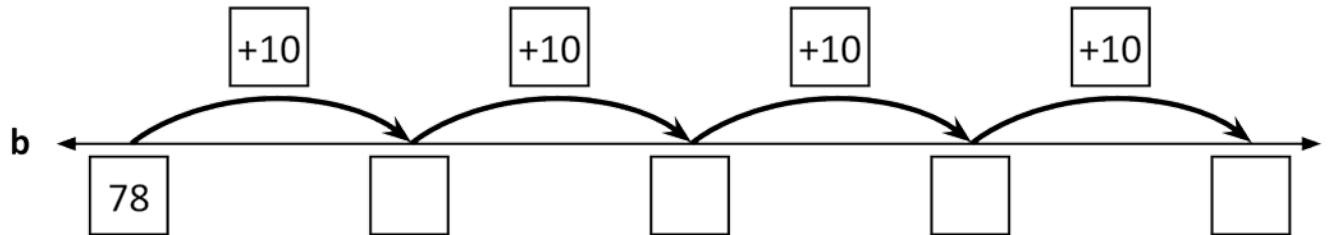
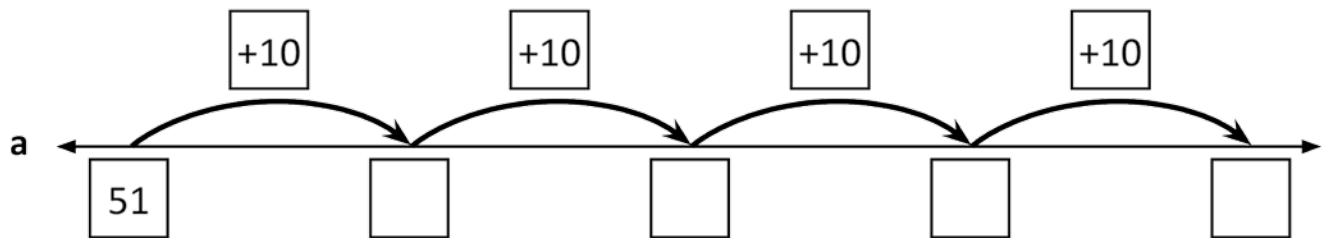
Addition mental strategies – jump strategy

The jump strategy is when you use a number line to jump in tens and then ones.

$32 + 25 = 57$



1 Practice jumping along the number line in tens:



2 Add these using the jump strategy. Show your working on each number line:

a $57 + 35 = \square$

b $54 + 28 = \square$

c $62 + 35 = \square$

Addition mental strategies – split strategy version 1

When adding large numbers in our heads, it can be easier to split one of the numbers into parts and add each part separately.

$$57 + 46 \begin{cases} 40 \\ 6 \end{cases} \longrightarrow 57 + 40 = 97 \longrightarrow 97 + 6 = 103$$

1 Practice separating these numbers into tens and ones. The first one has been done for you.

a $22 \begin{cases} 20 \\ 2 \end{cases}$

b $57 \begin{cases} \square \\ \square \end{cases}$

c $65 \begin{cases} \square \\ \square \end{cases}$

d $96 \begin{cases} \square \\ \square \end{cases}$

2 Practice adding tens to these numbers:

+	10	50	20	30	60
21					
48					

3 Use the split strategy with these problems:

a $38 + 34 \begin{cases} \square \\ \square \end{cases} \longrightarrow \square \longrightarrow \square$

b $29 + 28 \begin{cases} \square \\ \square \end{cases} \longrightarrow \square \longrightarrow \square$

c $75 + 14 \begin{cases} \square \\ \square \end{cases} \longrightarrow \square \longrightarrow \square$

d $94 + 17 \begin{cases} \square \\ \square \end{cases} \longrightarrow \square \longrightarrow \square$

Addition mental strategies – split strategy version 2

Here is another way to use the split strategy.

$$\begin{aligned}42 + 32 &= (4 \text{ tens} + 3 \text{ tens}) + (2 \text{ ones} + 2 \text{ ones}) \\ &= 7 \text{ tens} + 4 \text{ ones} \\ &= 74\end{aligned}$$

1 Use this way to add these:

a $53 + 56 = (\square \text{ tens} + \square \text{ tens}) + (\square \text{ ones} + \square \text{ ones})$
 $= \square \text{ tens} + \square \text{ ones}$
 $= \square$

b $35 + 24 = (\square \text{ tens} + \square \text{ tens}) + (\square \text{ ones} + \square \text{ ones})$
 $= \square \text{ tens} + \square \text{ ones}$
 $= \square$

c $78 + 11 = (\square \text{ tens} + \square \text{ tens}) + (\square \text{ ones} + \square \text{ ones})$
 $= \square \text{ tens} + \square \text{ ones}$
 $= \square$

d $45 + 24 = (\square \text{ tens} + \square \text{ tens}) + (\square \text{ ones} + \square \text{ ones})$
 $= \square \text{ tens} + \square \text{ ones}$
 $= \square$

2 Use either version of the split strategy to complete this table:

+	65	85	36	23	41
12					
34					

Mental addition strategies – word problems

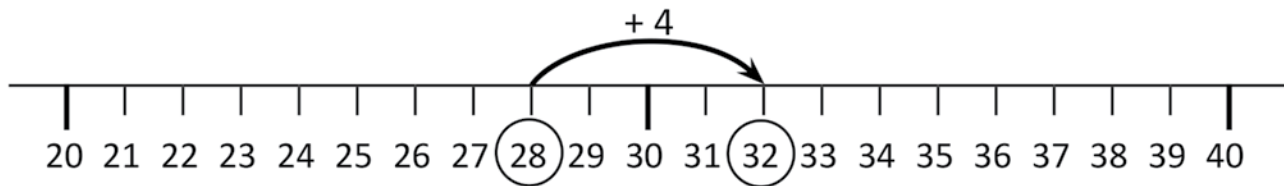
1 Solve these word problems using either the jump or the split strategies. Show all your working.

- a Mitch and Anna had a lemonade stall over the weekend. They sold 25 cups on Saturday and 18 cups on Sunday. How many cups did they sell altogether?
- b I practiced my guitar for 48 minutes before school and 34 minutes after school. How many minutes did I practice altogether?
- c Charlotte received \$15 for her birthday from her grandmother. She added this to her savings account which has \$53. How much does Charlotte have now?

Subtraction mental strategies – counting up

If there is only a small difference between the numbers, use counting up to find the difference. See: $32 - 28 = \boxed{?}$

Think: What can you add to 28 to get 32? Count up by 4.



1 Find the difference between these by counting up.

a $32 - 29 = \boxed{}$

b $33 - 28 = \boxed{}$

c $34 - 27 = \boxed{}$

d $71 - 68 = \boxed{}$

e $82 - 76 = \boxed{}$

f $73 - 69 = \boxed{}$

g $83 - 77 = \boxed{}$

h $112 - 109 = \boxed{}$

i $201 - 196 = \boxed{}$

2 Use counting up to complete these function machines.

a

In	Rule	Out
41	-37	
44		
42		
45		

b

In	Rule	Out
71	-68	
73		
75		
72		

c

In	Rule	Out
122	-119	
125		
124		
123		

d

In	Rule	Out
101	-98	
105		
107		
103		

With function machines, numbers go in, have the rule applied and then come out.



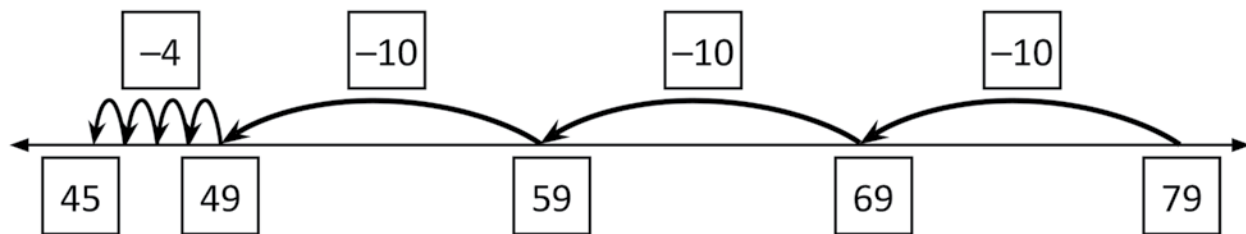
REMEMBER

e

In	Rule	Out
96	-89	
93		
92		
94		

Subtraction mental strategies – the jump strategy

The jump strategy is when you use a number line to jump in tens and then ones. Look at $79 - 34$. First we jump back in tens and then ones. So, $79 - 34 = 45$.



1 Subtract these using the jump strategy:

a $78 - 25 = \square$



b $93 - 31 = \square$



c $84 - 21 = \square$



d $79 - 36 = \square$



e $95 - 42 = \square$



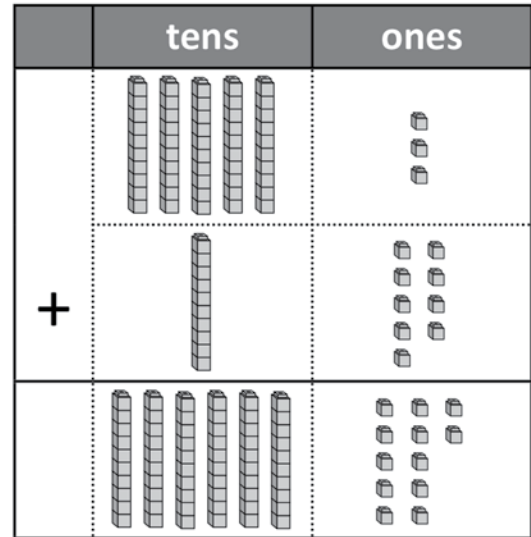
Written methods – addition to 99 with regrouping

Now that you have practiced regrouping on place value boards, we are going to apply this to a written strategy of addition where you have to regroup.

Let's look at $53 + 19$. If we use longs and shorts in columns, it looks like this.

Then, we regroup the tens and ones to get the answer, 72.

Now look at the written method for addition when regrouping:



e: 70

First, estimate the answer:

$50 + 20 = 70$. You estimate by rounding to the nearest 10.

	tens	ones
	¹ 5	3
+	1	9
	7	2

Add the ones: $3 + 9 = 12$

Think of this as 1 ten and 2 ones.

Write the 2 in the ones column and put the 1 in the tens column.

Now add the tens and write 7 in the tens column. Is our answer reasonable? Yes, because it is close to our estimate.

- 3** Try adding these 2 digit numbers using the written method. Start by writing your estimate:

a

e:

	tens	ones
	3	8
+	2	9

b

e:

	tens	ones
	4	9
+	2	7

c

e:

	tens	ones
	2	9
+	4	9

Written methods – addition to 99 with regrouping

Continued from page 34.

- 3** Try adding these 2 digit numbers using the written method. Start by writing your estimate:

d

e: <input type="text"/>		
	tens	ones
<hr/>		
	4	4
<hr/>		
+	1	7
<hr/>		
<hr/>		

e

e: <input type="text"/>		
	tens	ones
<hr/>		
	4	9
<hr/>		
+	4	3
<hr/>		
<hr/>		

f

e: <input type="text"/>		
	tens	ones
<hr/>		
	1	9
<hr/>		
+	6	2
<hr/>		
<hr/>		

g

e: <input type="text"/>		
	tens	ones
<hr/>		
	4	8
<hr/>		
+	1	8
<hr/>		
<hr/>		

h

e: <input type="text"/>		
	tens	ones
<hr/>		
	3	8
<hr/>		
+	2	9
<hr/>		
<hr/>		

i

e: <input type="text"/>		
	tens	ones
<hr/>		
	1	9
<hr/>		
+	5	9
<hr/>		
<hr/>		

- 4** Solve these word problems using the written method:

a I drove 39 mi on Thursday and 58 mi on Friday. How far did I drive altogether?

e: <input type="text"/>		
	tens	ones
<hr/>		
	3	9
<hr/>		
+	5	8
<hr/>		
<hr/>		

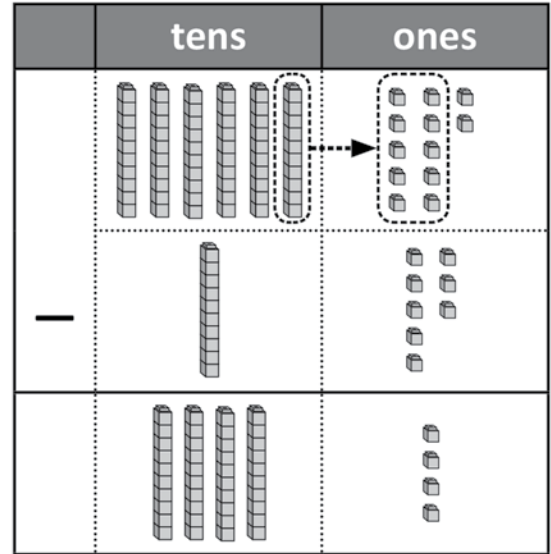
b Our class sold 19 raffle tickets during the first week of sales and 59 raffle tickets during the second week. How many were sold altogether?

e: <input type="text"/>		
	tens	ones
<hr/>		
	1	9
<hr/>		
+	5	9
<hr/>		
<hr/>		

Written methods – subtraction to 99 with regrouping

Now that you can regroup a ten on the place value board, we can look at written subtraction with regrouping.

Here is $62 - 18$ shown in longs and shorts. If we regroup a ten into ones, we can now subtract the ones.



Now look at the written method for subtraction when regrouping.

e: 40

	tens	ones
	6 ⁵	¹ 2
–	1	8
	4	4

First, estimate the answer:

$60 - 20 = 40$. You estimate by rounding to the nearest 10.

Look at the ones. We can't subtract 8 from 2, so we regroup a ten into ones.

We now have 12 ones. 12 subtract 8 is 4, so we write 4 in the ones column. Now subtract the tens. 5 tens subtract 1 ten is 4 tens. Write 4 in the tens column.

Is our answer reasonable? Yes, because it is close to our estimate.

3 Complete these written subtraction problems with regrouping. Start by writing your estimate:

a

e:

	tens	ones
	7	2
–	2	8

b

e:

	tens	ones
	5	2
–	4	3

c

e:

	tens	ones
	6	1
–	3	4

Written methods – subtraction to 99 with regrouping

Continued from page 38.

3 Complete these written subtraction problems with regrouping. Start by writing your estimate:

d

e:		
	tens	ones
	5	6
-	1	8

e

e:		
	tens	ones
	6	2
-	3	3

f

e:		
	tens	ones
	9	6
-	2	8

g

e:		
	tens	ones
	4	1
-	2	4

h

e:		
	tens	ones
	7	6
-	3	9

i

e:		
	tens	ones
	9	7
-	6	8

4 What is the digit behind the star?

a

	tens	ones
	7	2
-	5	★
	1	6

★ =

b

	tens	ones
	8	★
-	5	9
	2	5

★ =

c

	tens	ones
	7	9
-	5	★
	2	4

★ =

Multiplication facts – multiples

When two numbers are multiplied together, the answer is called a multiple.
For example, the first 3 multiples of 5 are 5, 10, 15.

$$1 \times 5 = 5$$

$$2 \times 5 = 10$$

$$3 \times 5 = 15$$

1 Complete the list of multiples for each number in the circle:

a **6**

6	12								
---	----	--	--	--	--	--	--	--	--

b **4**

4	8								
---	---	--	--	--	--	--	--	--	--

c **8**

8	16								
---	----	--	--	--	--	--	--	--	--

d **3**

3	6								
---	---	--	--	--	--	--	--	--	--

2 In each group of multiples, cross out the number that does not belong. You will need to look carefully, because they are not in order.

a Multiples of 5 10 20 35 40 12

b Multiples of 6 12 6 29 24 18

c Multiples of 8 25 16 32 40 8

3 Use the clues to work out the multiples:

a This number is a multiple of both 9 and 3 and is less than 20 but greater than 10.

b This number is a multiple of 5. It is greater than 15 but less than 25.

c This number is a multiple of both 4 and 8 and is the next squared number after 9.

Mental multiplication strategies – split strategy

The split strategy is when we multiply numbers in 2 parts.

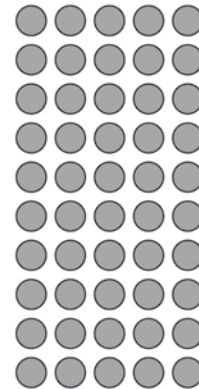
Let's use the split strategy for 12×5 .

Split 12 into 10 and 2. Next multiply each part by 5, then add:

What is 12×5 ?

$$10 \times 5 = 50$$

$$2 \times 5 = 10$$



$$50 + 10 = 60$$

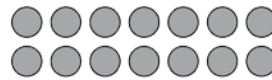
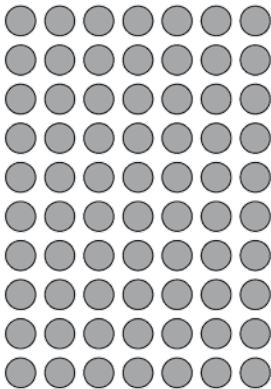
$$\text{So, } 12 \times 5 = 60$$

1 Try the split strategy with these. Use the arrays if you get stuck.

a What is 12×7 ?

$$10 \times \square = \square$$

$$2 \times \square = \square$$



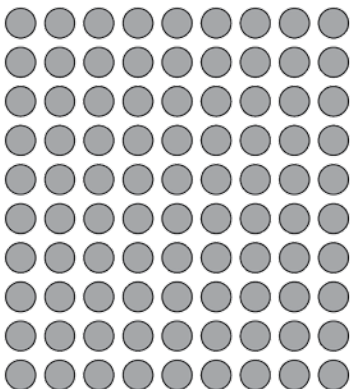
$$\square + \square = \square$$

$$\text{So, } 12 \times 7 = \square$$

b What is 12×9 ?

$$10 \times \square = \square$$

$$2 \times \square = \square$$



$$\square + \square = \square$$

$$\text{So, } 12 \times 9 = \square$$

Mental multiplication strategies – split strategy

2 Practice the split strategy again, this time without an array to look at.

a What is 12×3 ?

$$10 \times \square = \square$$

$$2 \times \square = \square$$

$$\square + \square = \square$$

$$\text{So, } 12 \times 3 = \square$$

b What is 12×6 ?

$$10 \times \square = \square$$

$$2 \times \square = \square$$

$$\square + \square = \square$$

$$\text{So, } 12 \times 6 = \square$$

c What is 12×8 ?

$$10 \times \square = \square$$

$$2 \times \square = \square$$

$$\square + \square = \square$$

$$\text{So, } 12 \times 8 = \square$$

3 Use the split strategy to multiply by 13.

13 is _____ + _____

a $13 \times 8 = \square$

b $13 \times 9 = \square$

c $13 \times 7 = \square$

d $13 \times 5 = \square$

Division – sharing and grouping

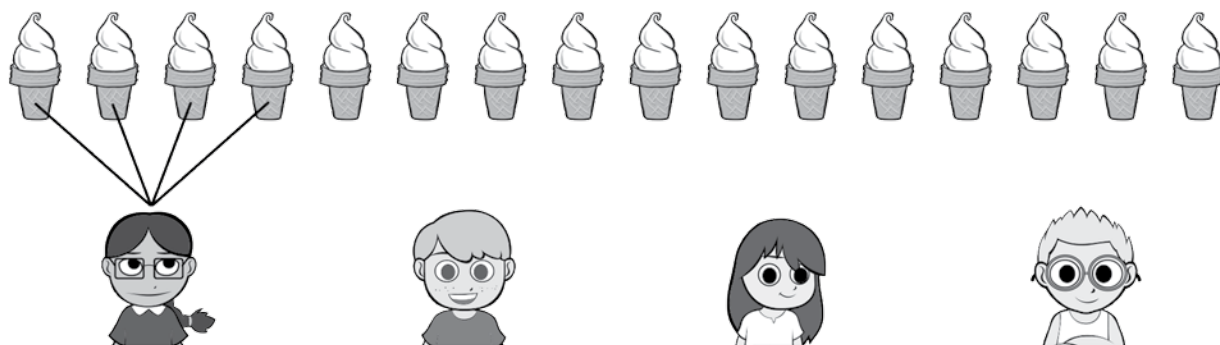
Division is when we make equal shares.

If we share these 6 cakes equally between 2 kids, they each get 3 cakes.

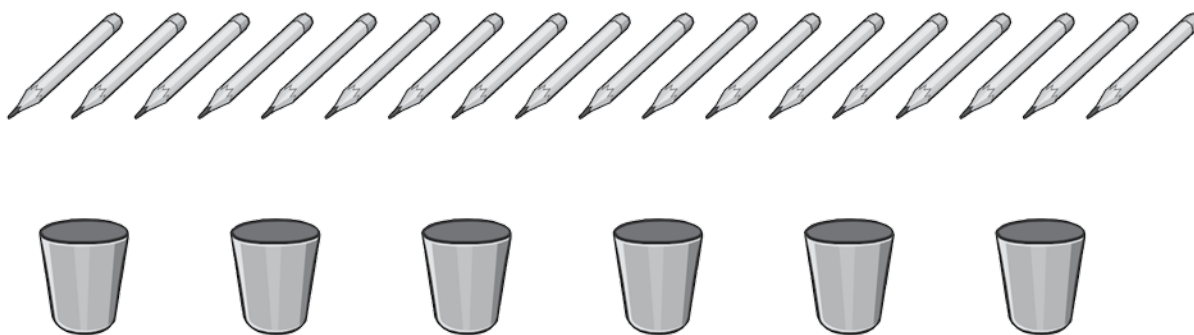


1 Share the items equally in each picture by drawing lines to connect them. Write how many are in each share.

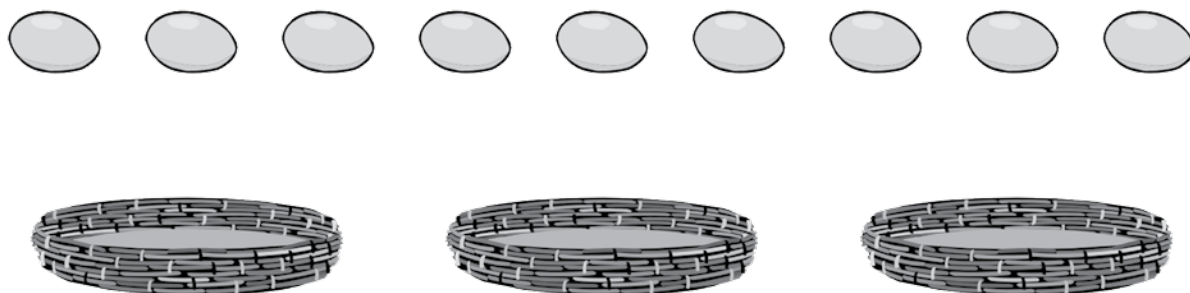
a Share these 16 ice creams among 4 kids. 4 equal shares = _____ each



b Share these 18 pencils between 6 cups. 6 equal shares = _____ each



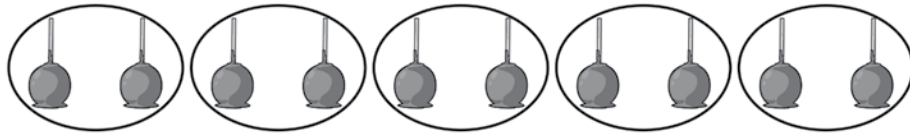
c Share these 9 eggs between 3 baskets. 3 equal shares = _____ each



Division – sharing and grouping

Division is also when we make equal groups.

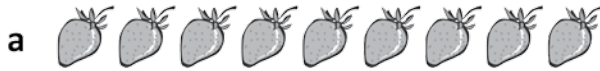
Here are 10 candy apples. How many bags do we need if we put 2 in each bag?



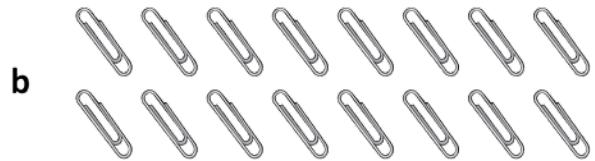
If we circle 2 candy apples in each group, we can make 5 groups. So, we need 5 bags.



2 Circle equal groups in each picture and write how many are in each share:



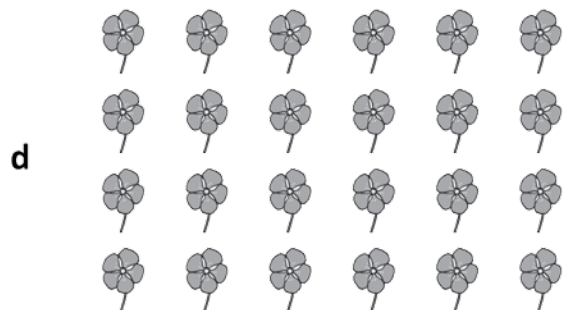
Out of 9 strawberries, how many groups are there if there are 3 in each group?



Out of 16 paper clips, how many groups are there if there are 4 in each group?



Out of 36 fish, how many groups are there if there are 6 in each group?



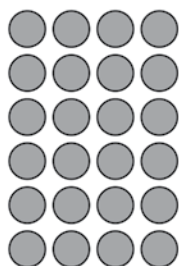
Out of 24 flowers, how many groups are there if there are 4 in each group?

3 Draw a picture to show 7 groups with 5 in each share.

How many in total?

Division – linking multiplication and division facts

Knowing multiplication facts will help with division facts.



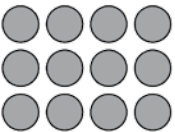
$$6 \times 4 = 24$$

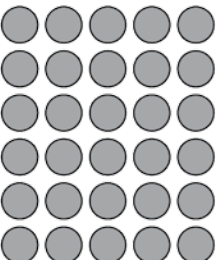
6 rows of 4 is 24.

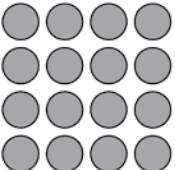
$$24 \div 4 = 6$$

24 divided into 4 shares is 6.

1 Describe each of these arrays using one multiplication and one division fact:


a  $\times 4 = 12$
 $12 \div 4 =$

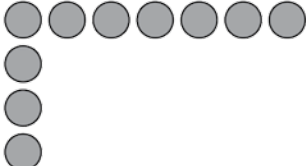
b  $\times 5 = 30$
 $30 \div 5 =$

c  $\times 4 = 16$
 $16 \div 4 =$

2 This time, you are given part of the array. Complete the array and then write one multiplication and one division fact that matches:

a  \times $=$
 \div $=$

b  \times $=$
 \div $=$

c  \times $=$
 \div $=$



What
to do

Read the clues to find out the mystery number:

I am a multiple of 6.
I am also a multiple of 4.
I am greater than 10,
but less than 20.

I am greater than 5×6 .
I am less than 40.
I am a square number.

I am smaller than 6×7 .
I am bigger than 6 squared.
The sum of my digits is 12.

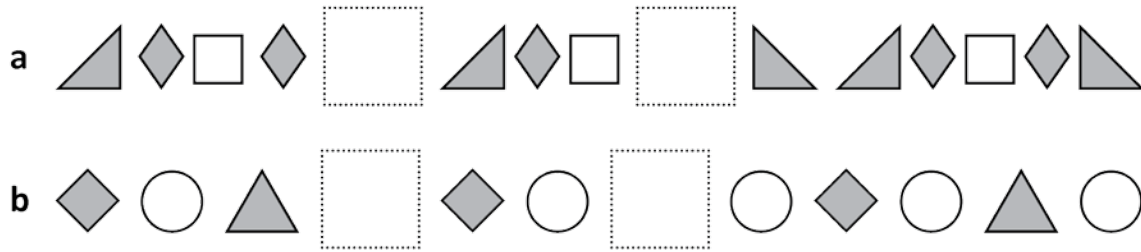
When I am multiplied by
a die number, I make 20.
I am less than 5.

I am bigger than 7×9 .
I am less than 7×11 .
I am divisible by 10.

I am a factor of 48.
I am bigger than 4 squared.
I am smaller than 5 squared.

Patterns and functions – identifying and creating patterns

4 Complete the shape patterns by drawing 2 missing shapes on each line:



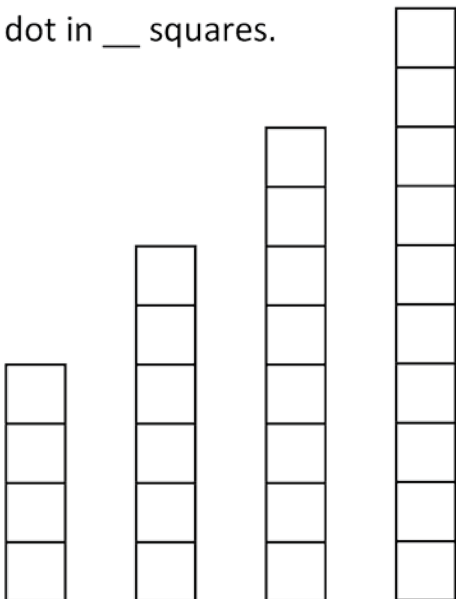
5 Look at the repeating letter pattern and write in the missing letters. You will see that each pattern is a word repeated.

a B I C _ _ C _ _ E B I _ _ Y _ _ L E B _ _ C Y C L _ _

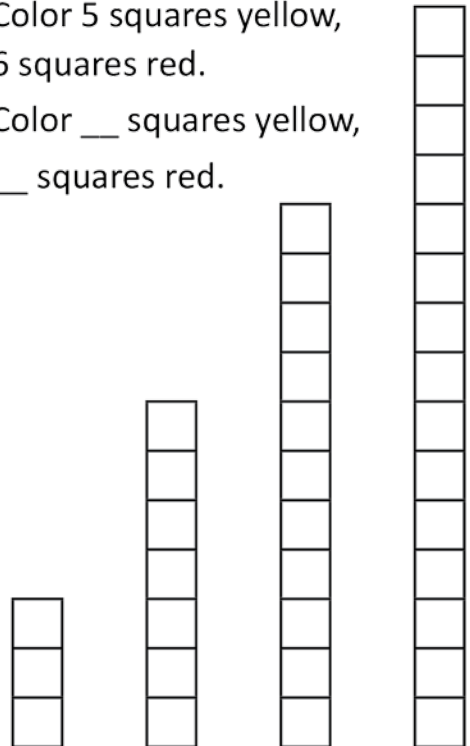
b C _ _ L O R _ _ C O _ _ O R _ _ C _ _ L _ _ R S

6 Follow the directions to create 2 growing patterns:

a Tick 2 squares and put a dot in 2 squares.
 Tick 3 squares and put a dot in 3 squares.
 Tick 4 squares and put a dot in 4 squares.
 Tick _ squares and put a dot in _ squares.



b Color 1 square yellow, 2 squares red.
 Color 3 squares yellow, 4 squares red.
 Color 5 squares yellow, 6 squares red.
 Color _ squares yellow, _ squares red.

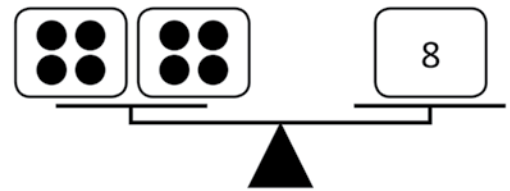


Equations and equivalence – introducing equations

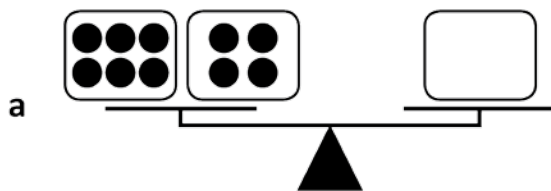
Look at these balanced scales.

In each box on the left there are 4 dots and on the other side is the number 8.

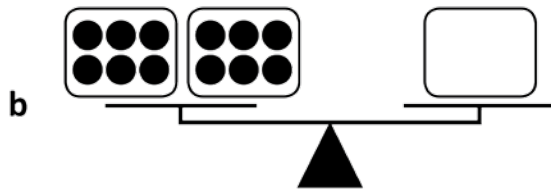
This makes sense because it shows the equation $4 + 4 = 8$. An equation is a sum with an equals symbol. One side must equal or balance the other just like these scales.



- 1 Balance each set of scales by writing a number in the box. Then write the matching equation:

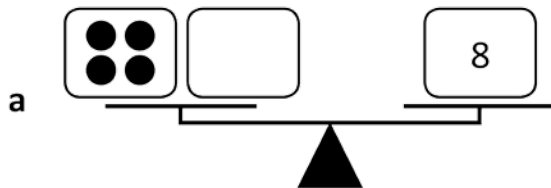


$$\square + \square = \square$$

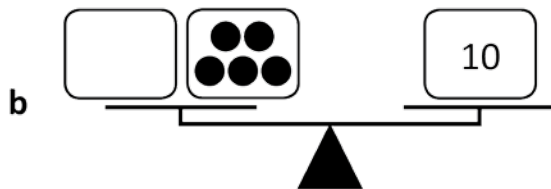


$$\square + \square = \square$$

- 2 Again, balance each set of scales but this time add the missing dots to the empty box:



$$\square + \square = \square$$



$$\square + \square = \square$$

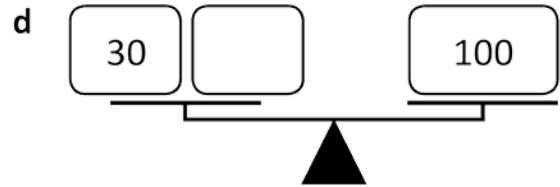
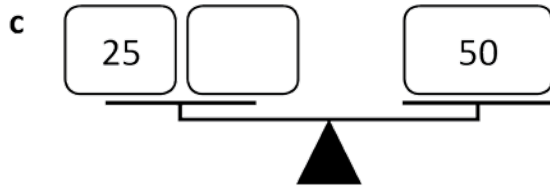
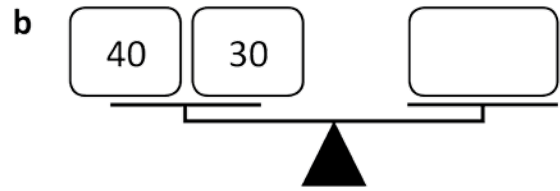
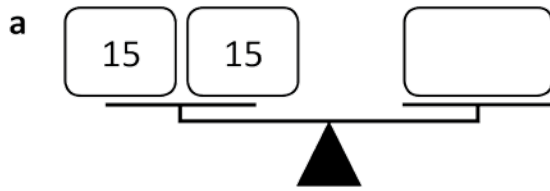
- 3 This time, create your own equation and show it on the balanced scales:



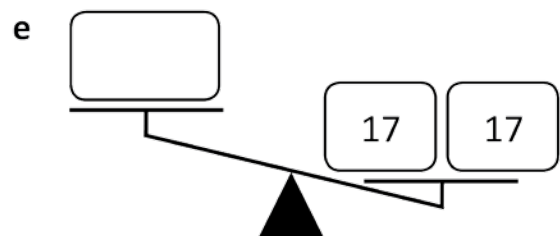
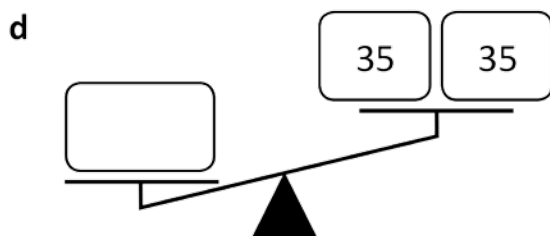
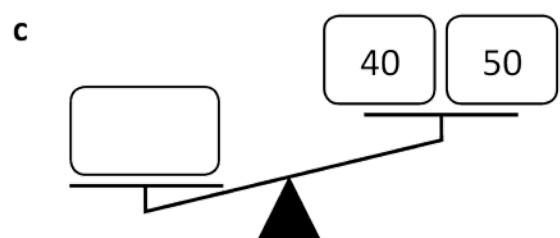
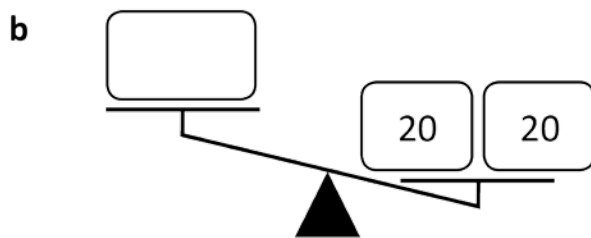
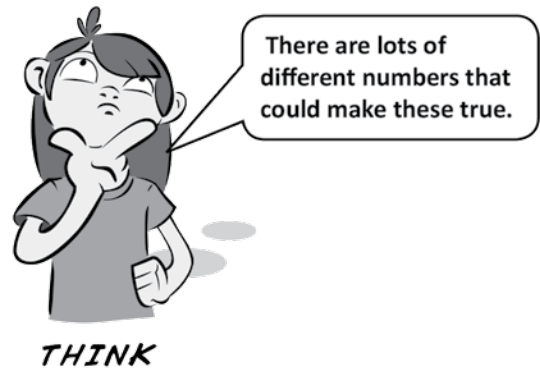
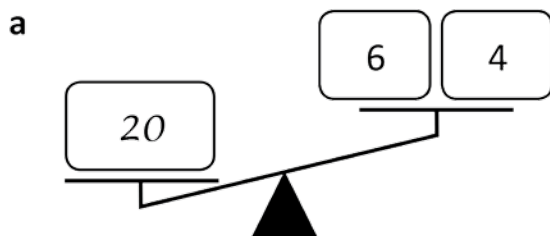
$$\square + \square = \square$$

Equations and equivalence – introducing equations

4 Balance each set of scales by writing the missing number in the box.



5 These scales are not balanced. This shows that the equation is not equal. One side is greater than the other. Write a number in the box to make these true. The first one has been done for you.



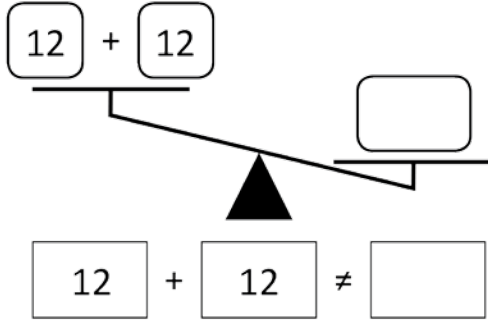
Equations and equivalence – not equal to symbol

When two sides of an equation are not balanced, it means that they are not equal. To show that an equation is not equal, we use the not equals symbol like this:

$$\boxed{12} + \boxed{9} \neq \boxed{20}$$

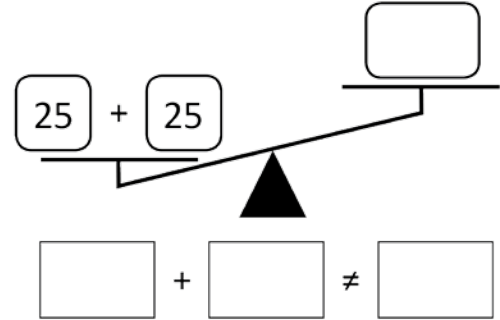
1 Balance each set of scales by writing a number in the box. Then write the matching equation.

a



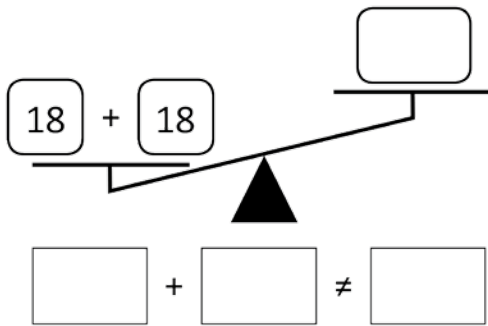
$$\boxed{12} + \boxed{12} \neq \boxed{}$$

b



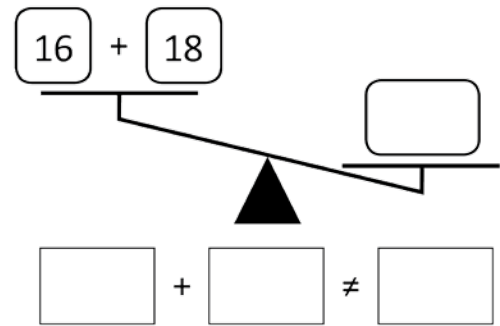
$$\boxed{} + \boxed{} \neq \boxed{}$$

c



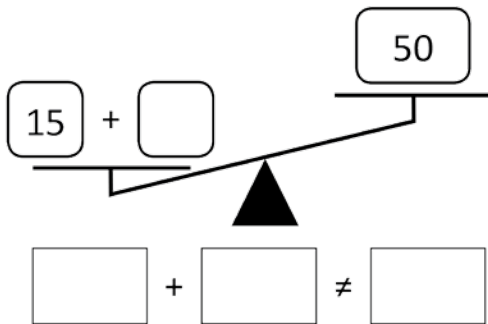
$$\boxed{} + \boxed{} \neq \boxed{}$$

d



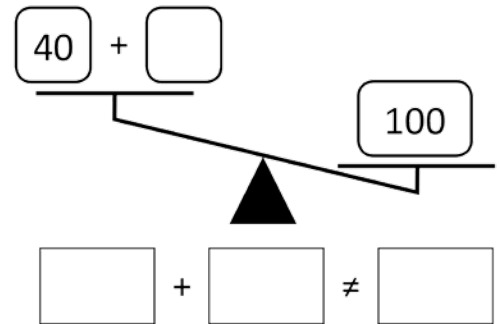
$$\boxed{} + \boxed{} \neq \boxed{}$$

e



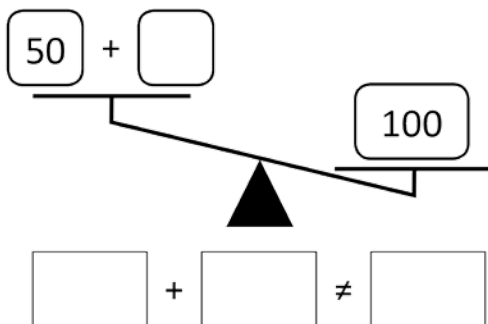
$$\boxed{} + \boxed{} \neq \boxed{}$$

f



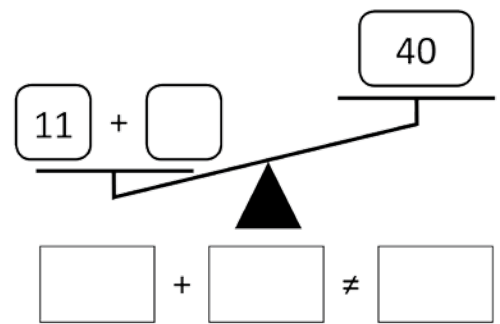
$$\boxed{} + \boxed{} \neq \boxed{}$$

g



$$\boxed{} + \boxed{} \neq \boxed{}$$

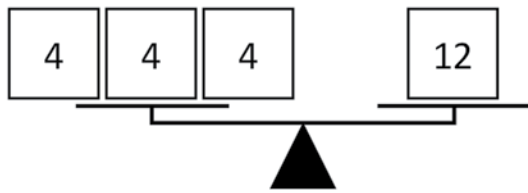
h



$$\boxed{} + \boxed{} \neq \boxed{}$$

Equations and equivalence – balanced equations using + and ×

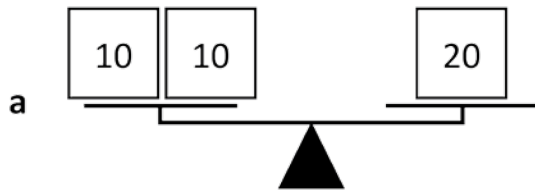
There are 2 different equations we could write for one set of balanced scales.



$$\boxed{4} + \boxed{4} + \boxed{4} = \boxed{12}$$

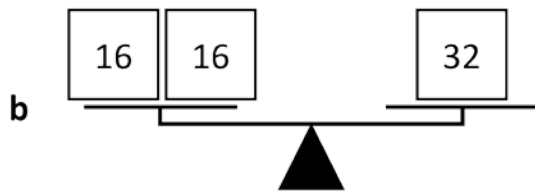
$$\boxed{3} \times \boxed{4} = \boxed{12}$$

1 Work out the values of the symbols in each problem.



$$\boxed{} + \boxed{} = \boxed{20}$$

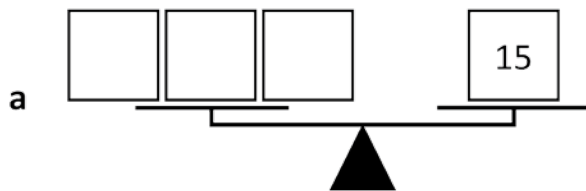
$$\boxed{2} \times \boxed{} = \boxed{20}$$



$$\boxed{} + \boxed{} = \boxed{32}$$

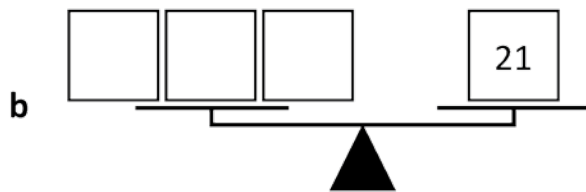
$$\boxed{2} \times \boxed{} = \boxed{32}$$

2 This time work out which number should go in the symbol.



$$\boxed{} + \boxed{} + \boxed{} = \boxed{15}$$

$$\boxed{} \times \boxed{5} = \boxed{15}$$



$$\boxed{} + \boxed{} + \boxed{} = \boxed{21}$$

$$\boxed{} \times \boxed{7} = \boxed{21}$$

