

Sukindi

— LEARNING —

Homework without the hassle

Sukindi is an Australian learning platform that supports Teachers, Parents and Students with an interactive homework app and downloadable resources.



Scan to start your
free 7-day trial

www.sukindi.com.au



Introducing Division - Year 2

Table of Contents	
Presentation: Introducing Division	
Fair Sharing Makes Equal Groups	
Equal Groups Quick Guide	
Lolly Jar Fair Share	
Marble Muncher	
Picnic Fair Sharing Mats	
Make Equal Groups	
Egg Carton Sharing Stories	
Arrays and Repeated Addition	
What's Left Over?	
Equal Shares to Fractions	
Division Problem Solving	
Quiz: Introducing Division	
Assessment: Sharing Day Challenge	
Rubric: Introducing Division - Year 2 Rubric	



FAIR SHARING

MAKES EQUAL GROUPS

Fair sharing gives every group the same number.



12 shared into 3 equal groups = 4 in each group



Each group has 4. It is fair!



EQUAL GROUPS

QUICK GUIDE

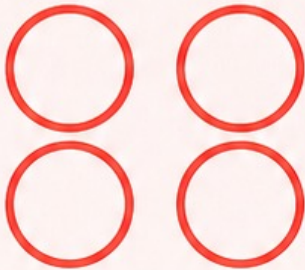
1.



1. COUNT

Count the total.

2.



2. CHOOSE

Choose the number of groups.

3.



3. SHARE

Share one at a time.

4.



4. CHECK

Check every group is equal.



EXAMPLE

16 counters shared into 4 equal groups = 4 in each group



LOLLY JAR FAIR SHARE

Name: _____

Share 12 sweets equally between the 2 jars.



Jar 1



Jar 2



Sweets in each jar: _____



Number sentence: _____

SWEET COUNTERS

Cut out the sweets. Use a challenge strip to fair share.



Challenge 1: Share 8 sweets between 2 jars.



Challenge 2: Share 12 sweets between 2 jars.



Challenge 3: Share 15 sweets between 3 jars.



Challenge 4: Share 20 sweets between 4 jars.





MARBLE MUNCHER

Equal Groups Game



Step 1:

1. Pick a card.

Step 2:

2. Count the marbles.

Step 3:

3. Share or group them equally.

Step 4:

4. Record each group and any leftovers.

Group 1

Group 2

Group 3

Group 4



Are all the groups equal?

MARBLE MUNCHER CARDS A

Whole-number challenges

CARD 1



Share 8
marbles
between
2 groups.

CARD 2



Share 12
marbles
between
3 groups.

CARD 3



Put 15
marbles
into groups
of 5.

CARD 4



Share 16
marbles
between
4 groups.

CARD 5



Put 18
marbles
into groups
of 3.

CARD 6



Put 20
marbles
into groups
of 4.

CARD 7



Share 10
marbles
between
2 groups.

CARD 8



Share 14
marbles
between
2 groups.

CARD 9



Put 12
marbles
into groups
of 2.

CARD 10



Put 20
marbles
into groups
of 5.

CARD 11



Share 24
marbles
between
4 groups.

CARD 12



Put 21
marbles
into groups
of 3.



MARBLE MUNCHER CARDS B



Leftover challenges

CARD 1

Share 7 marbles
between 2 groups.



CARD 2

Put 10 marbles
into groups of 3.



CARD 3

Share 14 marbles
between 4 groups.



CARD 4

Put 17 marbles
into groups of 5.



CARD 5

Share 19 marbles
between 3 groups.



CARD 6

Put 22 marbles
into groups of 4.



CARD 7

Share 11 marbles
between 2 groups.



CARD 8

Put 16 marbles
into groups of 3.



CARD 9

Share 23 marbles
between 5 groups.



CARD 10

Put 25 marbles
into groups of 6.



CARD 11

Share 11 marbles
between 4 groups.



CARD 12

Put 18 marbles
into groups of 5.





MARBLE MUNCHER

RECORDING PAGE

Name: _____



Record what happens for each card.



Card	Total	Number of groups	In each group	Left over



How did you check the groups were equal?





PICNIC FAIR SHARING MATS

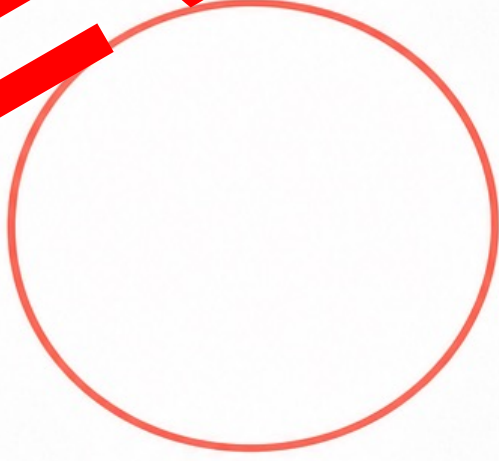
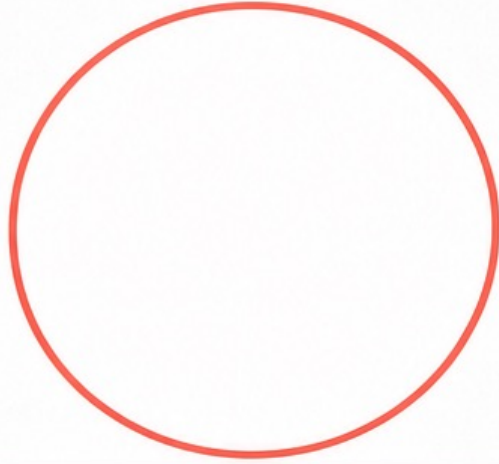


SHARE EQUALLY BETWEEN 2 FRIENDS

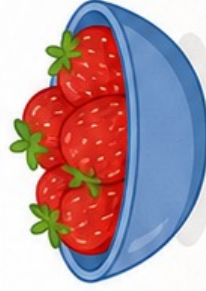
Place or draw the food so each plate is equal.

Plate 1

Plate 2



_____ shared between 2 = _____ on each plate



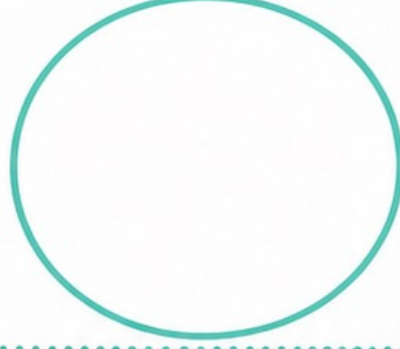
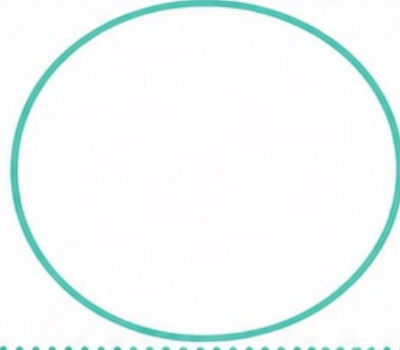
SHARE EQUALLY BETWEEN 3 FRIENDS

Place or draw the food so each plate is equal.

Plate 1

Plate 2

Plate 3



_____ shared between 3 = _____ on each plate

PICNIC FAIR SHARING MATS



SHARE EQUALLY BETWEEN 4 FRIENDS

Place or draw the food so each plate is equal.

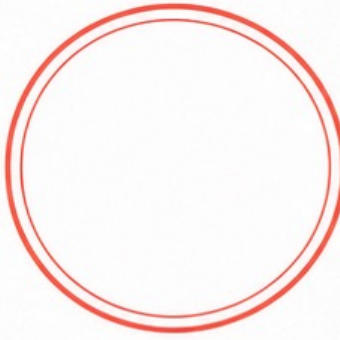


Plate 1



Plate 2

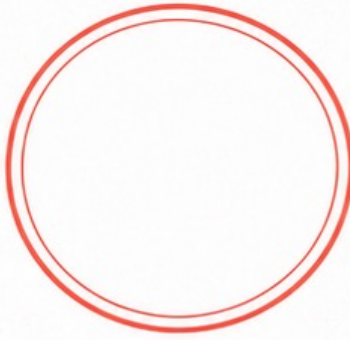


Plate 3

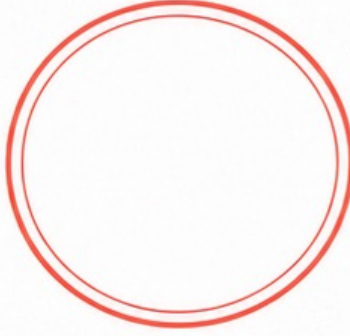


Plate 4

_____ shared between 4 = _____ on each plate



SHARE EQUALLY BETWEEN 5 FRIENDS

Place or draw the food so each plate is equal.

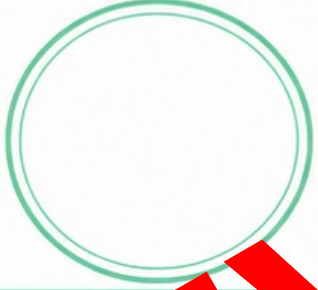


Plate 1



Plate 2

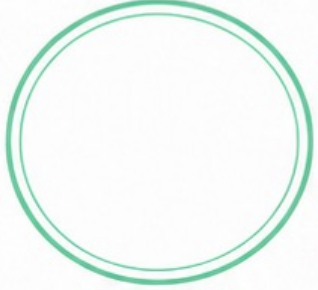


Plate 3



Plate 4

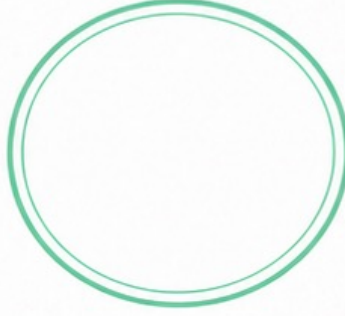


Plate 5

_____ shared between 5 = _____ on each plate

PICNIC FAIR SHARE CHALLENGES

Use counters or draw on a sharing mat.

1

Share 6
between 2
friends.



2

Share 9
between 3
friends.



3

Share 12
between 4
friends.



4

Share 15
between 5
friends.



5

Share 7
between 2
friends.



6

Share 10
between 3
friends.



7

Share 14
between 4
friends.



8

Share 17
between 5
friends.



9

Share 18
between 2
friends.



10

Share 18
between 3
friends.



11

Share 20
between 4
friends.



12

Share 25
between 5
friends.



13

Share 11
between 2
friends.



14

Share 13
between 3
friends.



15

Share 19
between 4
friends.



16

Share 22
between 5
friends.



MAKE EQUAL GROUPS

Page 1 — Circle and record

Name: _____

Circle each collection into the number of equal groups shown.

A. Circle 12 stars into 3 equal groups.



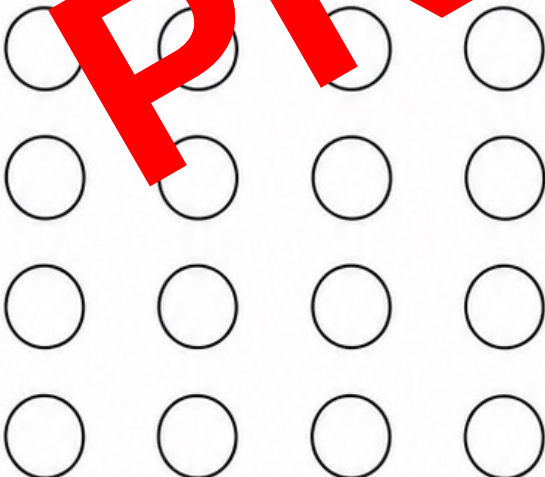
Record A: _____ groups of _____

B. Circle 15 apples into 5 equal groups.



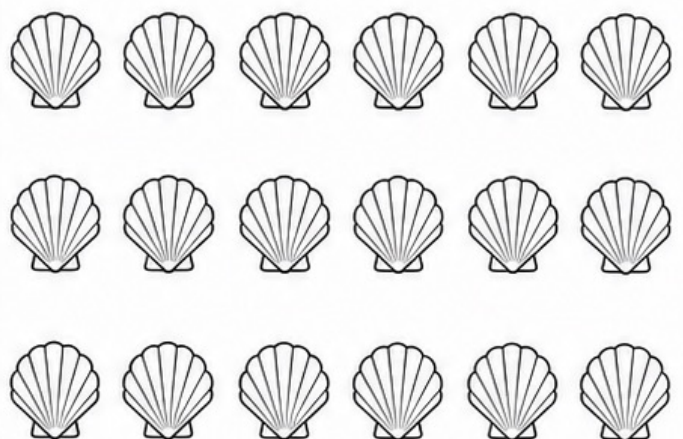
Record B: _____ groups of _____

C. Circle 16 dots into 4 equal groups.



Record C: _____ groups of _____

D. Circle 18 shells into 3 equal groups.



Record D: _____ groups of _____

Check: Does every group have the same number?

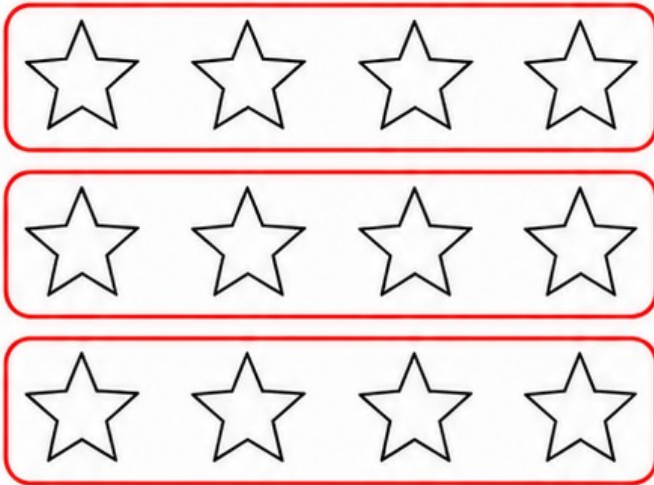
MAKE EQUAL GROUPS

Page 1 — Circle and record

Name: ANSWERS

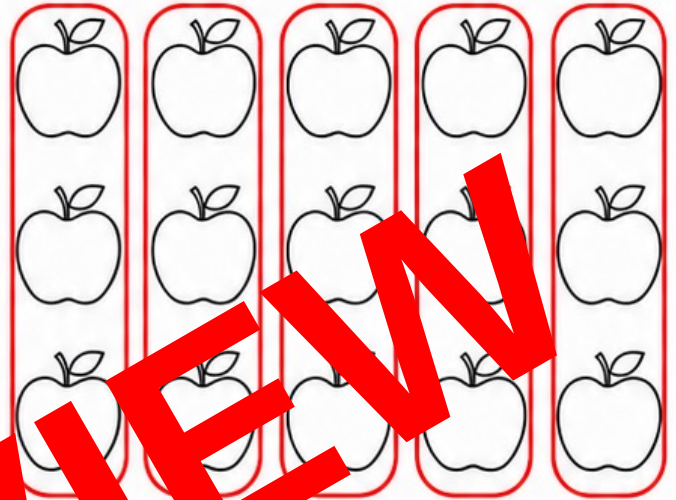
Circle each collection into the number of equal groups shown.

A. Circle 12 stars into 3 equal groups.



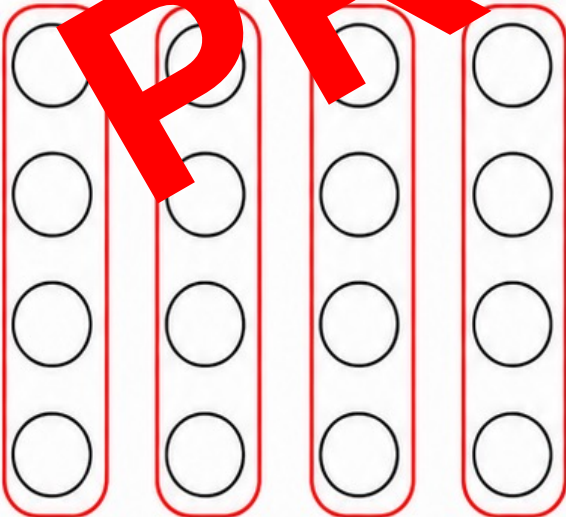
Record A: 3 groups of 4

B. Circle 15 apples into 5 equal groups.



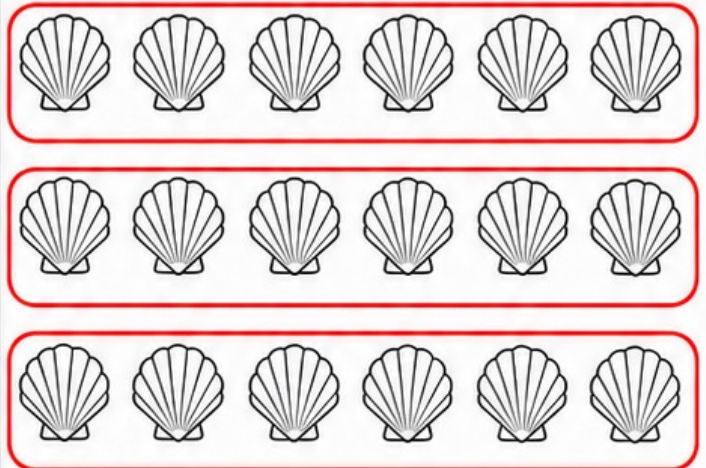
Record B: 5 groups of 3

C. Circle 16 dots into 4 equal groups.



Record C: 4 groups of 4

D. Circle 18 shells into 3 equal groups.



Record D: 3 groups of 6

Check: Does every group have the same number?

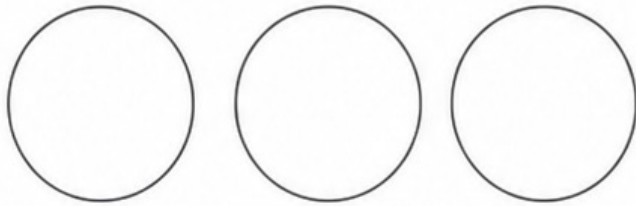
MAKE EQUAL GROUPS

Page 2 — Draw and solve

Name: _____

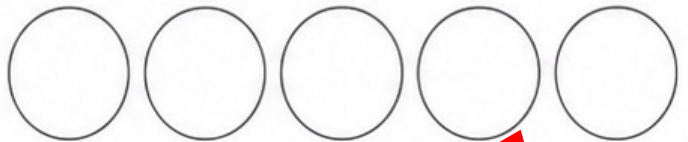
Draw counters to show each equal-group description.

A. 3 groups of 4



Total: _____

B. 5 groups of 2



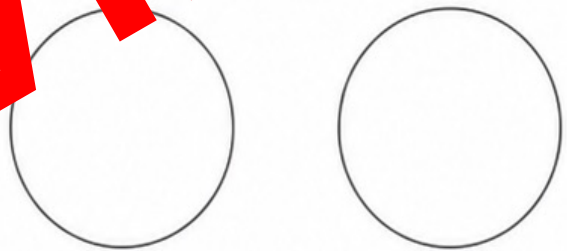
Total: _____

C. 4 groups of 5



Total: _____

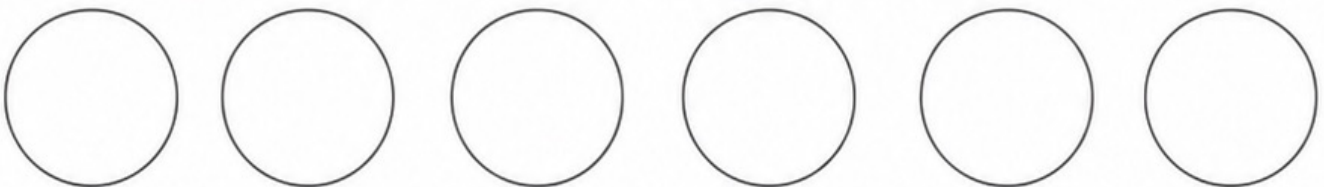
D. 2 groups of 7



Total: _____

EXTENSION

Use 18 counters. Make equal groups of 3.



I made _____ equal groups.

How did you check your groups were equal?

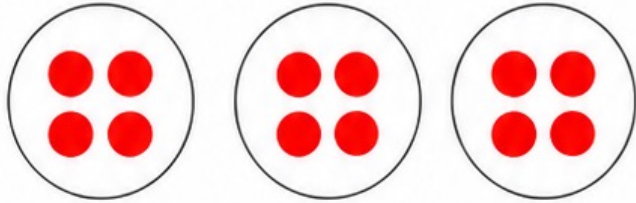
MAKE EQUAL GROUPS

Page 2 — Draw and solve

Name: ANSWERS

Draw counters to show each equal-group description.

A. 3 groups of 4



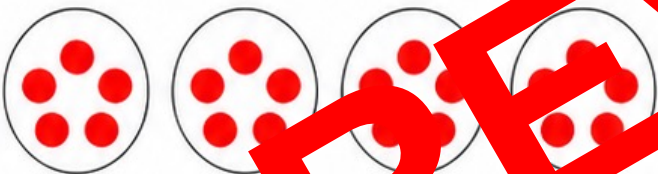
Total: 12

B. 5 groups of 2



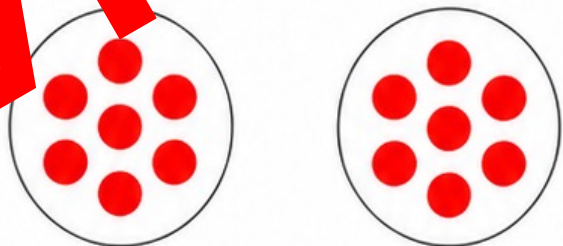
Total: 10

C. 4 groups of 5



Total: 20

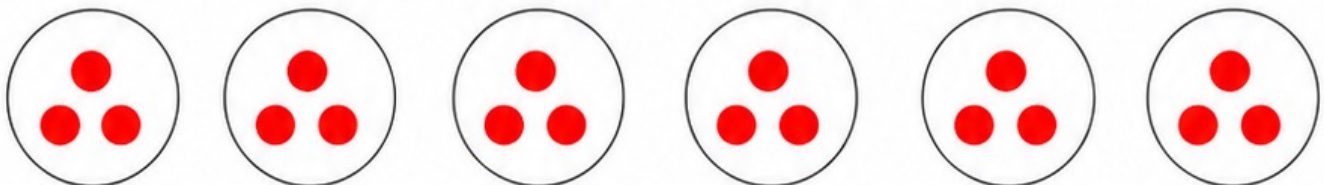
D. 2 groups of 7



Total: 14

EXTENSION

Use 18 counters. Make equal groups of 3.



I made 6 equal groups.

How did you check your groups were equal?

Each group has 3 counters.

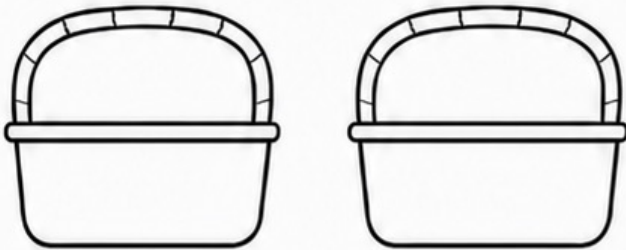
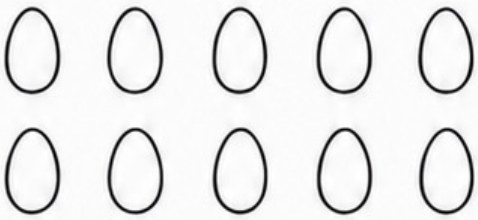
EGG CARTON SHARING STORIES

Page 1 — Share and record

Name: _____

Draw lines or counters to share each collection equally.

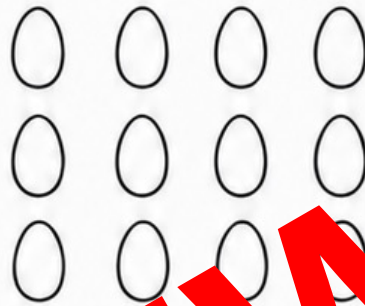
A. Share 10 eggs between 2 children.



Each child gets _____ eggs.

_____ shared between _____ = _____ each

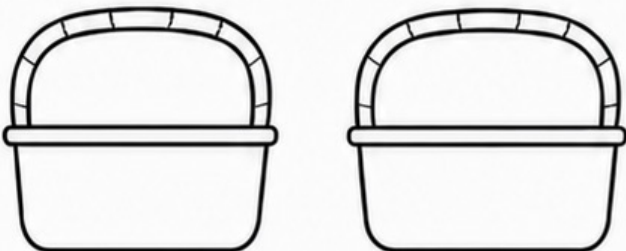
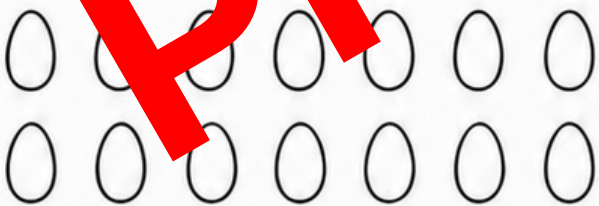
B. Share 12 eggs between 3 children.



Each child gets _____ eggs.

_____ shared between _____ = _____ each

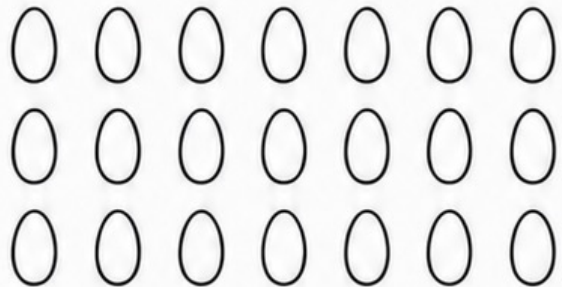
C. Share 12 eggs between 2 children.



Each child gets _____ eggs.

_____ shared between _____ = _____ each

D. Share 21 eggs between 3 children.



Each child gets _____ eggs.

_____ shared between _____ = _____ each

Check that every child receives the same number.

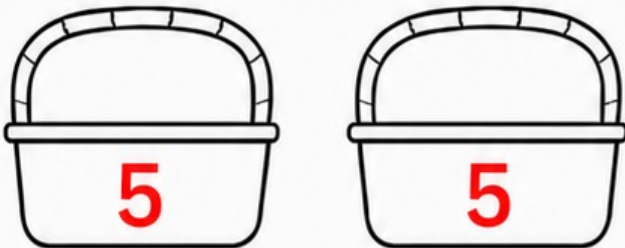
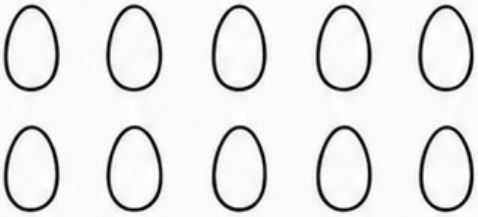
EGG CARTON SHARING STORIES

Page 1 — Share and record

Name: **ANSWERS**

Draw lines or counters to share each collection equally.

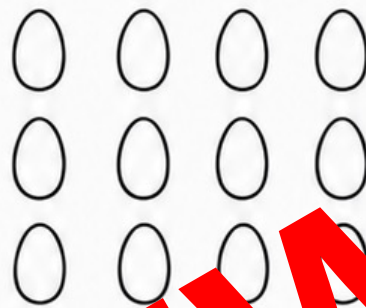
A. Share 10 eggs between 2 children.



Each child gets 5 eggs.

10 shared between 2 = 5 each

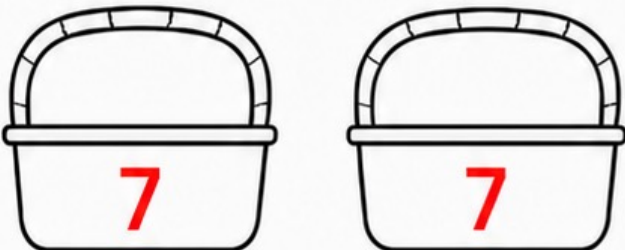
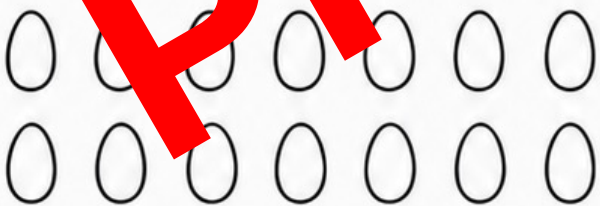
B. Share 12 eggs between 3 children.



Each child gets 4 eggs.

12 shared between 3 = 4 each

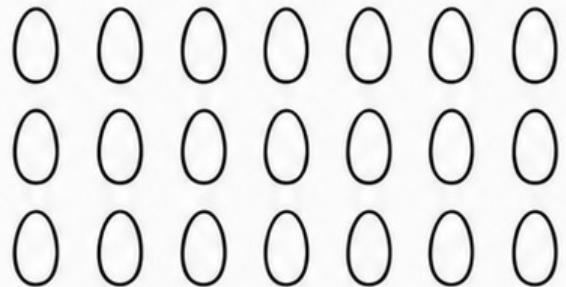
C. Share 14 eggs between 2 children.



Each child gets 7 eggs.

14 shared between 2 = 7 each

D. Share 21 eggs between 3 children.



Each child gets 7 eggs.

21 shared between 3 = 7 each

Check that every child receives the same number.

SHARING STORIES

Page 2 — Draw a model

Name: _____

Draw a model, then answer in a sentence.

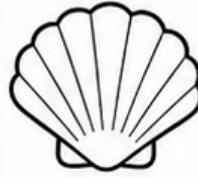


1. 16 cupcakes are shared equally between 4 children. How many cupcakes does each child get?

My model:



Answer: _____



2. 15 shells are shared equally between 3 children. How many shells does each child get?

My model:



Answer: _____



3. 20 crayons are packed into groups of 5. How many groups are made?

My model:



Answer: _____



4. 13 apples are shared equally between 3 children. How many does each child get and how many are left over?

My model:



Answer: _____

Which problem had a leftover? Explain what it meant.

SHARING STORIES

Page 2 — Draw a model

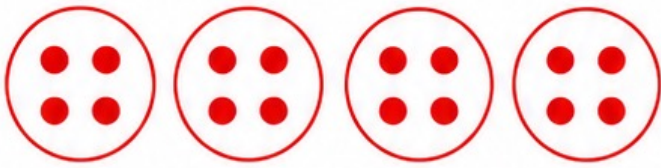
Name: **ANSWERS**

Draw a model, then answer in a sentence.

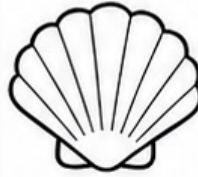


1. 16 cupcakes are shared equally between 4 children. How many cupcakes does each child get?

My model:



Answer: **Each child gets 4 cupcakes.**



2. 15 shells are shared equally between 3 children. How many shells does each child get?

My model:

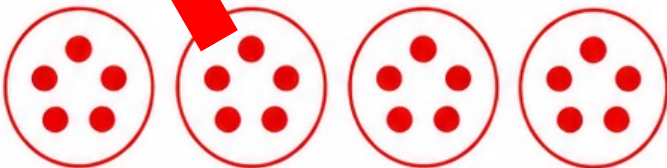


Answer: **Each child gets 5 shells.**



3. 20 crayons are packed into groups of 5. How many groups are made?

My model:

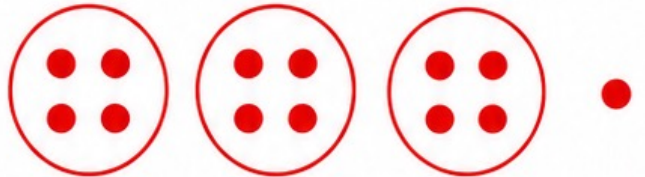


Answer: **4 groups are made.**



4. 13 apples are shared equally between 3 children. How many does each child get and how many are left over?

My model:



Answer: **Each child gets 4 apples and 1 is left over.**

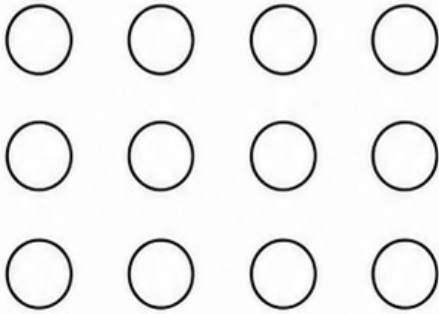
Which problem had a leftover? Explain what it meant.

Problem 4. One apple could not be shared equally.

ARRAYS AND REPEATED ADDITION

Name: _____

A



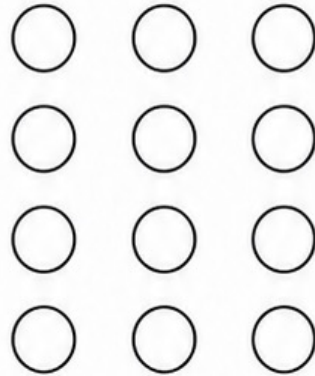
Rows: _____

In each row: _____

Repeated addition: _____

Total: _____

B



Rows: _____

In each row: _____

Repeated addition: _____

Total: _____

C



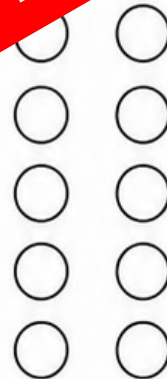
Rows: _____

In each row: _____

Repeated addition: _____

Total: _____

D



Rows: _____

In each row: _____

Repeated addition: _____

Total: _____

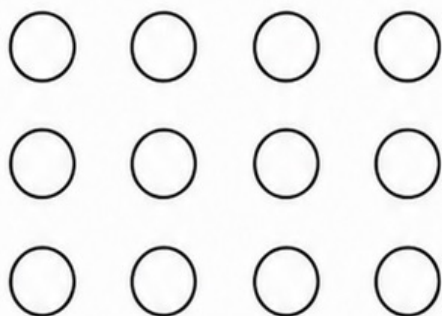
Draw an array for 4 groups of 5. Write its total.

Challenge total: Total: _____

ARRAYS AND REPEATED ADDITION

Name: ANSWERS

A



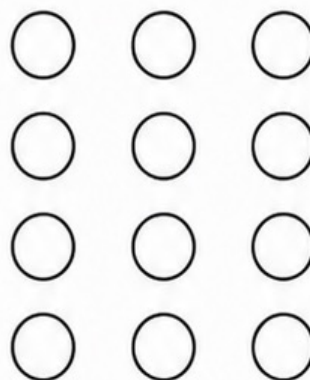
Rows: 3

In each row: 4

Repeated addition: $4 + 4 + 4 = 12$

Total: 12

B



Rows: 4

In each row: 3

Repeated addition: $3 + 3 + 3 + 3 = 12$

Total: 12

C



Rows: 2

In each row: 7

Repeated addition: $7 + 7 = 14$

Total: 14

D



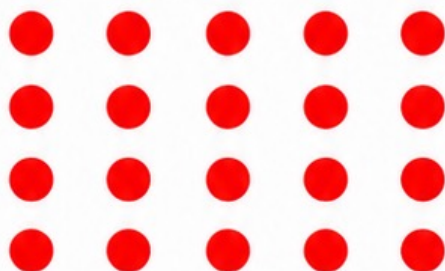
Rows: 5

In each row: 2

Repeated addition: $2 + 2 + 2 + 2 + 2 = 10$

Total: 10

Draw an array for 4 groups of 5. Write its total.



Challenge total: Total: 20

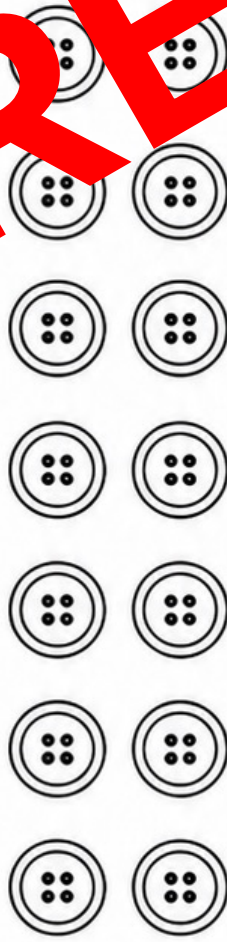
WHAT'S LEFT OVER?

Page 1 — Make full groups

Name: _____

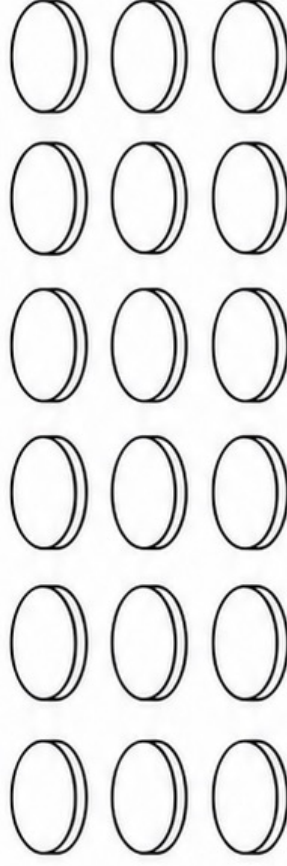
Make full groups. Record any objects left over.

A. Group 14 buttons in 3s.



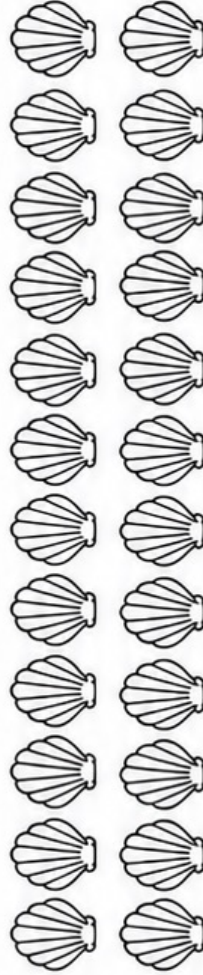
Full groups: _____ In each group: _____ Left over: _____

B. Group 18 counters in 4s.



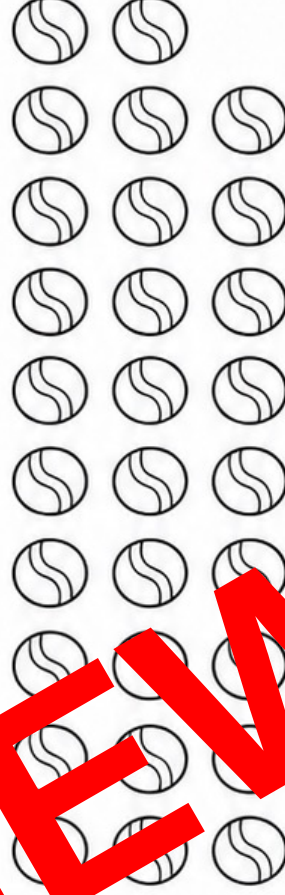
Full groups: _____ In each group: _____ Left over: _____

C. Group 24 shells in 5s.



Full groups: _____ In each group: _____ Left over: _____

D. Group 29 marbles in 6s.



Full groups: _____ In each group: _____ Left over: _____

A leftover cannot make another full equal group.

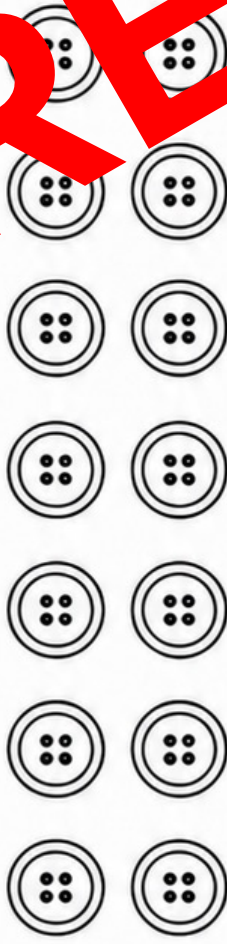
WHAT'S LEFT OVER?

Page 1 — Make full groups

Name: **ANSWERS**

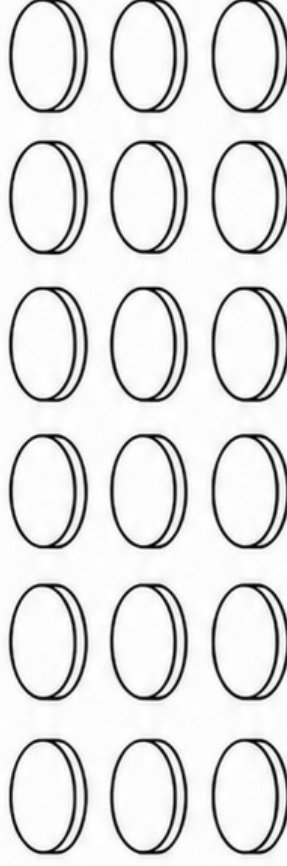
Make full groups. Record any objects left over.

A. Group 14 buttons in 3s.



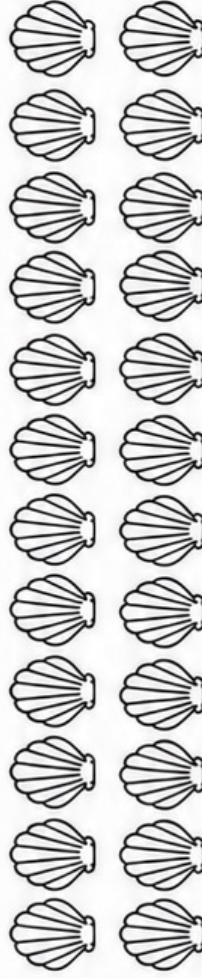
Full groups: **4** In each group: **3** Left over: **2**

B. Group 18 counters in 4s.



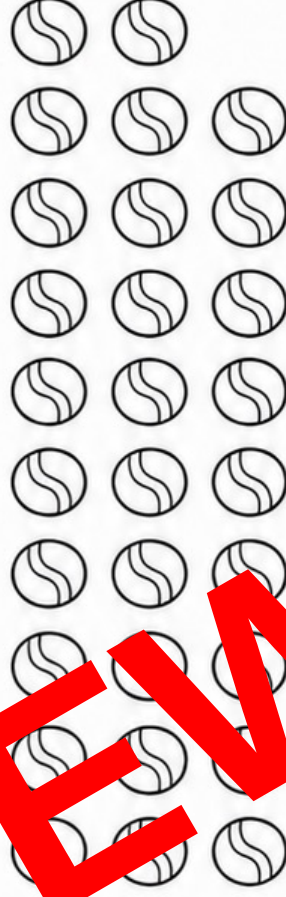
Full groups: **4** In each group: **4** Left over: **2**

C. Group 24 shells in 5s.



Full groups: **4** In each group: **5** Left over: **4**

D. Group 29 marbles in 6s.



Full groups: **4** In each group: **6** Left over: **5**

A leftover cannot make another full equal group.

WHAT'S LEFT OVER?

Page 2 — Remainder stories

Name: _____

Draw a model. Write the full groups and the leftover.

1. 14 apples are shared equally between 4 children. How many does each child get? How many are left over?



My model:

Full groups: _____

Left over: _____

2. 17 toy cars are packed into boxes of 5. How many full boxes are made? How many are left over?



My model:

Full groups: _____

Left over: _____

3. 19 stickers are shared equally between 3 children. How many does each child get? How many are left over?



My model:

Full groups: _____

Left over: _____

4. 23 marbles are put into groups of 5. How many full groups are made? How many are left over?



My model:

Full groups: _____

Left over: _____



In Problem 1, what could you do with the 2 leftover apples?

WHAT'S LEFT OVER?

Page 2 — Remainder stories

Name: ANSWERS

Draw a model. Write the full groups and the leftover.

1. 14 apples are shared equally between 4 children. How many does each child get? How many are left over?



My model:

14 = 4 groups of 3 + 2 left

Full groups: 4

Left over: 2

2. 17 toy cars are packed into boxes of 5. How many full boxes are made? How many are left over?



My model:

17 = 3 groups of 5 + 2 left

Full groups: 3

Left over: 2

3. 19 stickers are shared equally between 3 children. How many does each child get? How many are left over?



My model:

19 = 3 groups of 6 + 1 left

Full groups: 3

Left over: 1

4. 23 marbles are put into groups of 5. How many full groups are made? How many are left over?



My model:

23 = 4 groups of 5 + 3 left

Full groups: 4

Left over: 3



In Problem 1, what could you do with the 2 leftover apples?

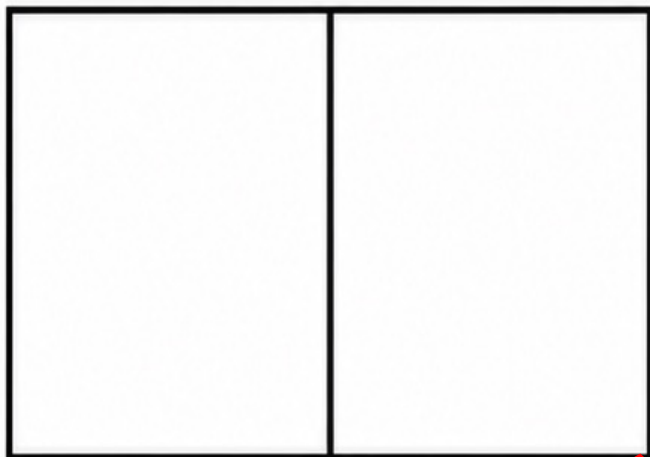
Cut the 2 apples into halves. Each child gets half an apple.

EQUAL SHARES TO FRACTIONS

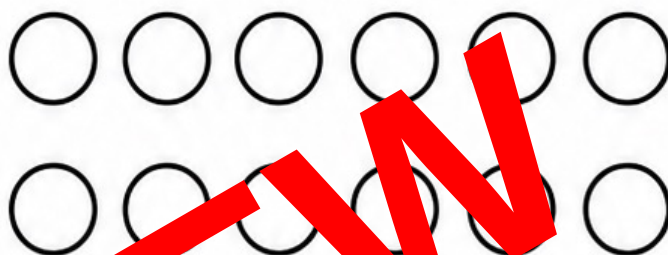
Page 1 • Halves and Quarters

Name: _____

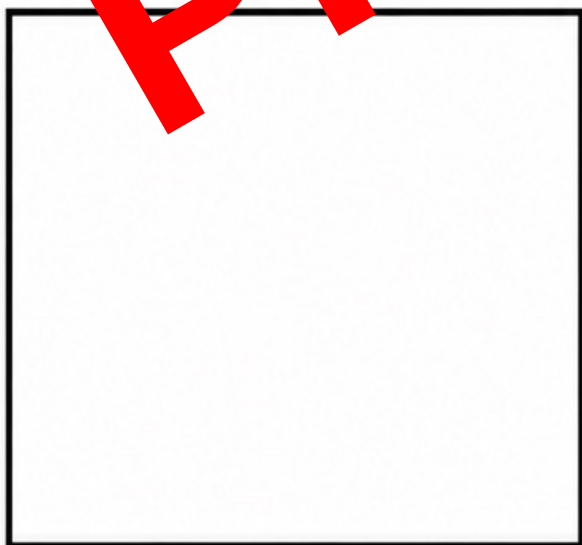
- 1** Shade one half of the rectangle.



- 2** Circle one half of the 12 dots.



- 3** Draw lines to divide the square into four equal squares. Shade one quarter.



- 4** Circle one quarter of the 16 stars.



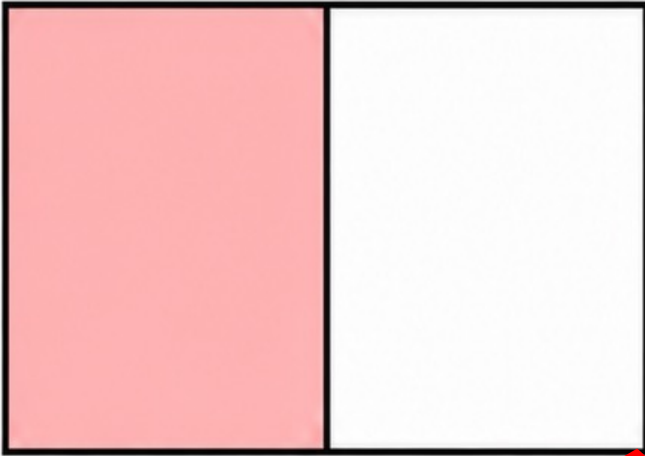
Remember: Equal shares must be the same size.

EQUAL SHARES TO FRACTIONS

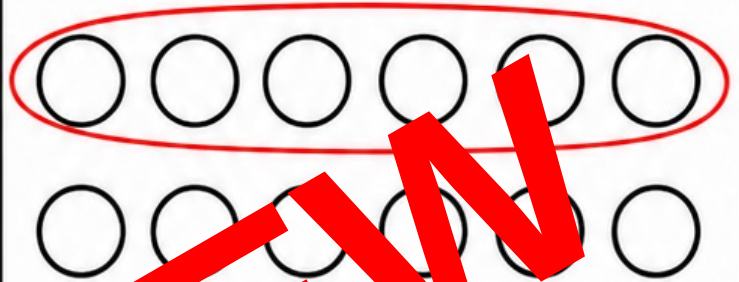
Page 1 • Halves and Quarters

Name: ANSWERS

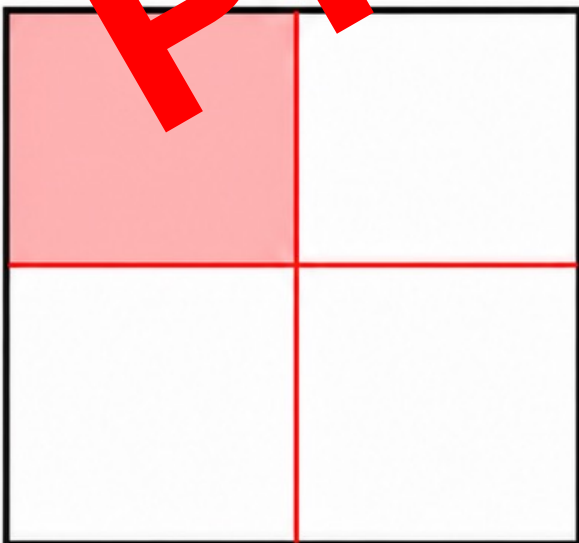
- 1** Shade one half of the rectangle.



- 2** Circle one half of the 12 dots.



- 3** Draw lines to divide the square into four equal squares. Shade one quarter.



- 4** Circle one quarter of the 16 stars.



Remember: Equal shares must be the same size.

EQUAL SHARES TO FRACTIONS

Page 2 • Halves, Quarters and Eighths

Name: _____

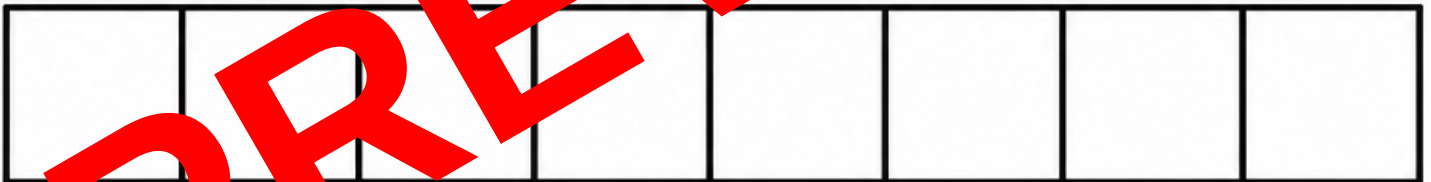
- 1** Draw 1 line to show 2 equal halves. Label each half.



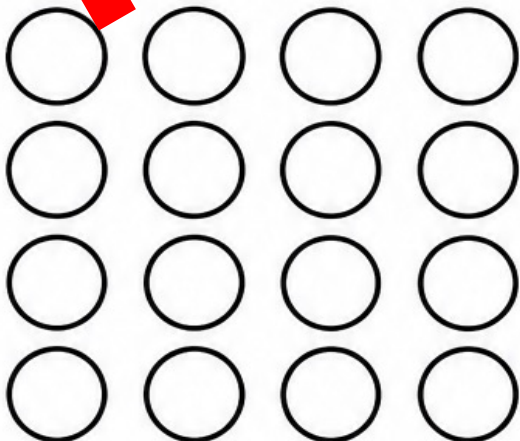
- 2** Draw 3 lines to show 4 equal quarters. Label each quarter.



- 3** Shade one eighth of the strip.



- 4** Use the 16 counters.



One half is _____ counters.

One quarter is _____ counters.

One eighth is _____ counters.

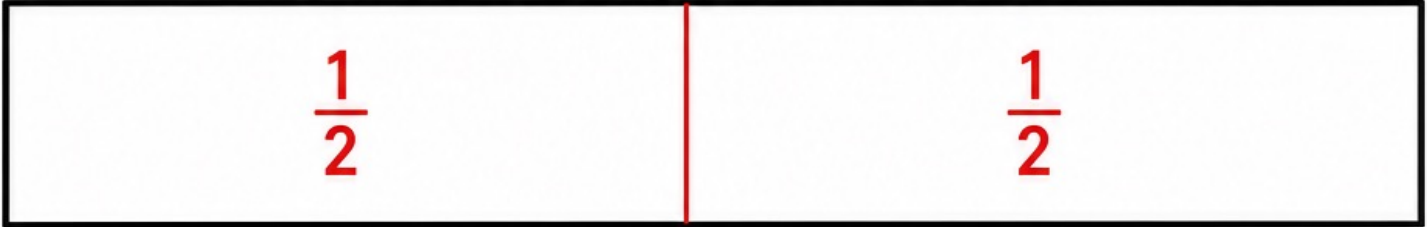
- 5** True or false? Quarters can be made by halving halves. _____

EQUAL SHARES TO FRACTIONS

Page 2 • Halves, Quarters and Eighths

Name: ANSWERS

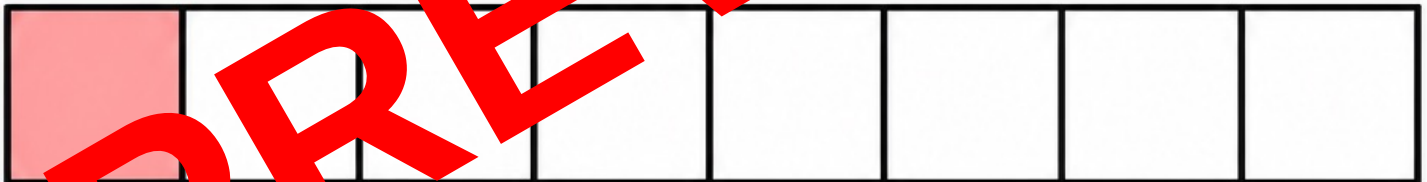
- 1** Draw 1 line to show 2 equal halves. Label each half.



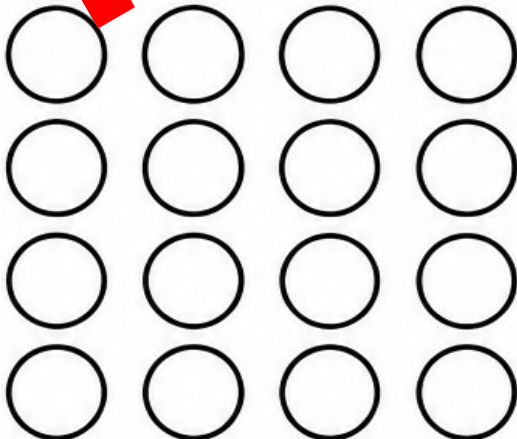
- 2** Draw 3 lines to show 4 equal quarters. Label each quarter.



- 3** Shade one eighth of the strip.



- 4** Use the 16 counters.



One half is 8 counters.

One quarter is 4 counters.

One eighth is 2 counters.

- 5** True or false? Quarters can be made by halving halves. True

DIVISION PROBLEM SOLVING

Name: _____

Show your thinking with drawings, groups or number sentences.

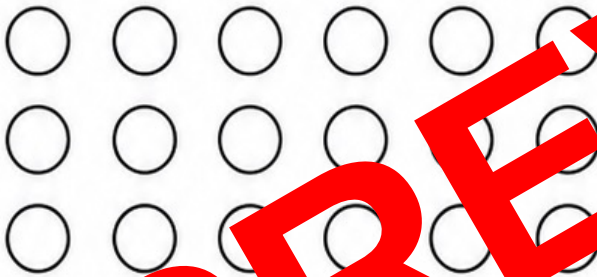
- 1** 16 apples are shared equally between 4 children. How many apples does each child get?

Answer: _____ apples each.

- 2** How many groups of 5 can be made from 20 counters?

Answer: _____ groups.

- 3** This array has 3 rows of 6.



Repeated addition: _____ + _____ = _____

Total: _____ dots.

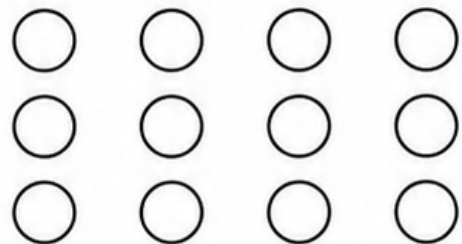
- 4** Put 17 marbles into groups of 5.

_____ full groups and _____ left over.

- 5** One half of 14 is _____.

--	--

- 6** Show two ways to make equal groups with 12 counters.



_____ groups of _____

_____ groups of _____

DIVISION PROBLEM SOLVING

Name: ANSWERS

Show your thinking with drawings, groups or number sentences.

- 1** 16 apples are shared equally between 4 children. How many apples does each child get?

$$16 \div 4 = 4$$

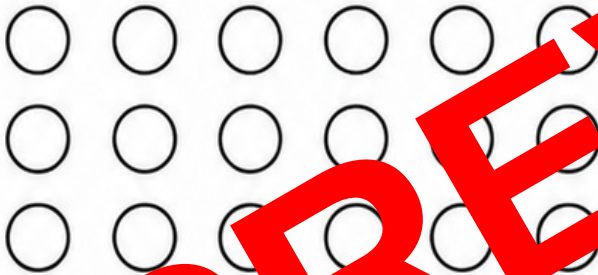
Answer: 4 apples each.

- 2** How many groups of 5 can be made from 20 counters?

$$20 \div 5 = 4$$

Answer: 4 groups.

- 3** This array has 3 rows of 6.



Repeated addition: 6 + 6 + 6 = 18

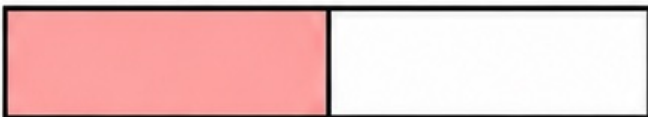
Total: 18 dots.

- 4** Put 17 marbles into groups of 5.

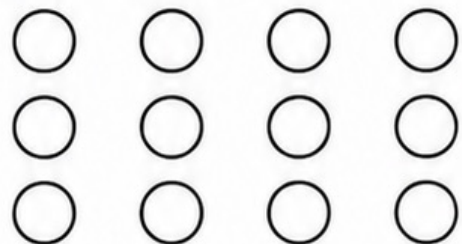
$$17 = 3 \text{ groups of } 5 + 2 \text{ left.}$$

3 full groups and 2 left over.

- 5** One half of 14 is 7.



- 6** Show two ways to make equal groups with 12 counters.



3 groups of 4

4 groups of 3

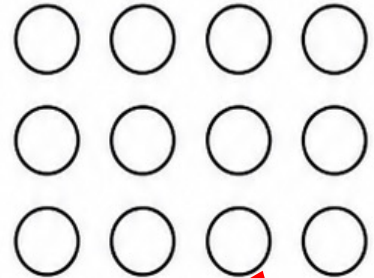
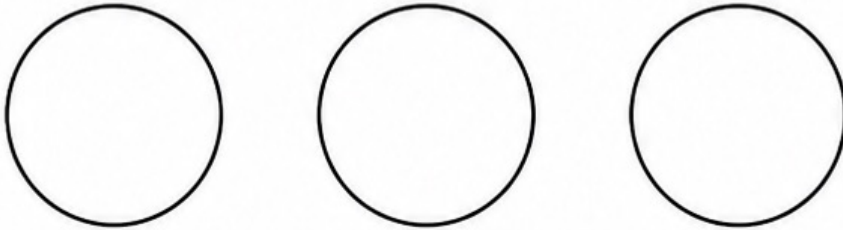
SHARING DAY CHALLENGE

Assessment • Page 1

Name: _____

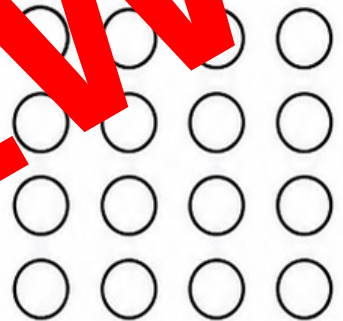
Score: _____ / 10

- 1** Share 12 cupcakes equally among 3 plates. Draw the shares.
How many cupcakes on each plate? (2 marks)



Answer: _____ cupcakes each.

- 2** Circle groups of 4 in the 16 counters. How many groups? (2 marks)

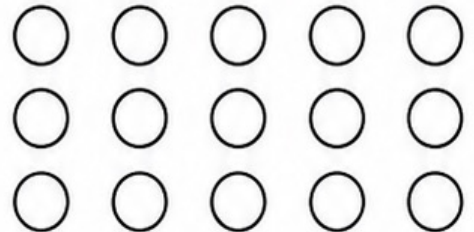


Answer: _____ groups.

- 3** The array has _____ rows of _____ (2 marks)

Repeated addition: _____ + _____ + _____ = _____

Total _____ dots.



- 4** Tick the number sentence that shows 18 in 6 equal groups. (2 marks)

☐ $3 + 3 + 3 + 3 + 3 + 3 = 18$

☐ $6 + 6 + 6 = 18$

Each group has _____.

- 5** Ten balloons are shared as 3, 3 and 4. Is the share fair? Explain. (2 marks)

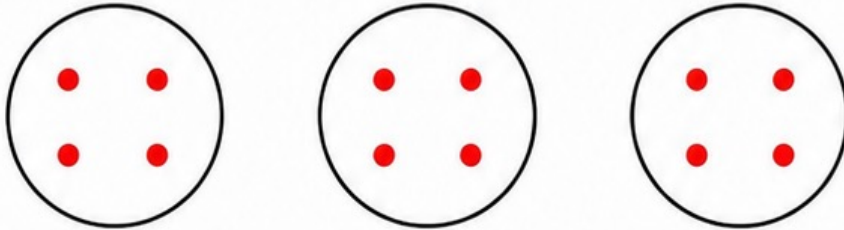
SHARING DAY CHALLENGE

Assessment • Page 1

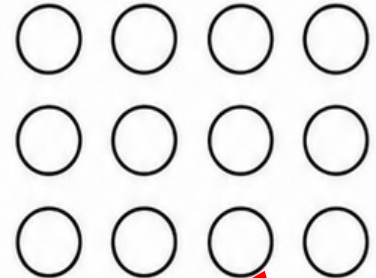
Name: ANSWERS

Score: 10 / 10

- 1** Share 12 cupcakes equally among 3 plates. Draw the shares.
How many cupcakes on each plate? (2 marks)

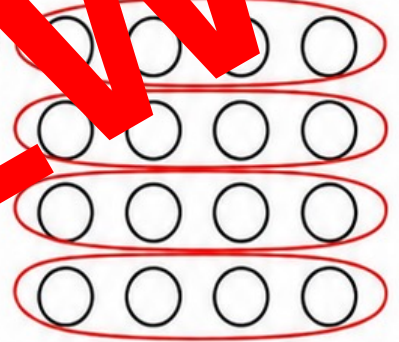


Answer: 4 cupcakes each.



- 2** Circle groups of 4 in the 16 counters. How many groups? (2 marks)

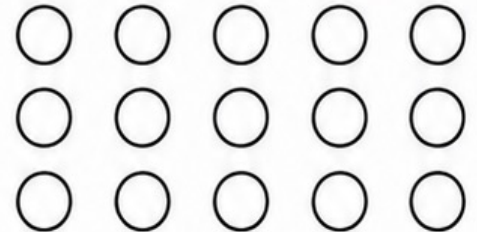
Answer: 4 groups.



- 3** The array has rows of (2 marks)

Repeated addition: 5 + 5 + 5 = 15

Total 15 dots.



- 4** Tick the number sentence that shows 18 in 6 equal groups. (2 marks)

☒ $3 + 3 + 3 + 3 + 3 + 3 = 18$

☐ $6 + 6 + 6 = 18$

Each group has 3.

- 5** Ten balloons are shared as 3, 3 and 4. Is the share fair? Explain. (2 marks)

No. Equal groups must have the same amount.

3, 3 and 4 are not equal.

SHARING DAY CHALLENGE

Assessment • Page 2

Name: _____

Score: _____ / 10

6 Put 14 shells into groups of 4. (2 marks)

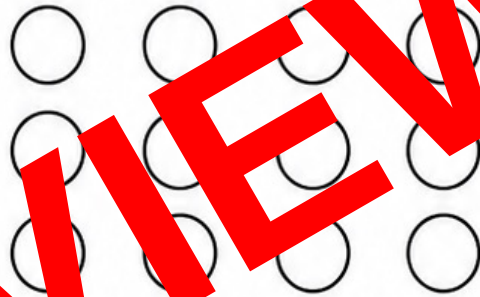
_____ full groups and _____ left over.

Show your thinking:

7 Use 12 counters. (2 marks)

One half of 12 is _____.

One quarter of 12 is _____.



8 Shade one eighth of the strip. (1 mark)



9 Share 18 sandwiches equally among 6 children. (2 marks)

Number sentence: _____

Answer: _____ sandwiches each.

10 Why must equal groups be the same size? Explain with an example. (3 marks)

SHARING DAY CHALLENGE

Assessment • Page 2

Name: ANSWERS

Score: 10 / 10

6 Put 14 shells into groups of 4. (2 marks)

3 full groups and 2 left over.

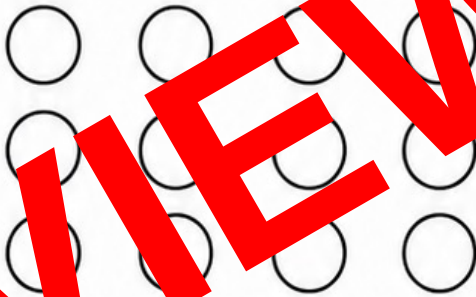
Show your thinking:

$$14 = 4 + 4 + 4 + 2$$

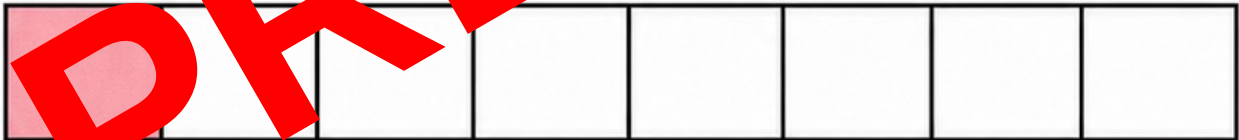
7 Use 12 counters. (2 marks)

One half of 12 is 6.

One quarter of 12 is 3.



8 Shade one eighth of the strip. (1 mark)



9 Share 18 sandwiches equally among 6 children. (2 marks)

Number sentence: $18 \div 6 = 3$

Answer: 3 sandwiches each.

10 Why must equal groups be the same size? Explain with an example. (3 marks)

— Equal groups give everyone the same amount.

— For example, 12 shared among 3 gives 4 each.

INTRODUCING DIVISION • YEAR 2 RUBRIC

Student: _____ Date: _____ Total: _____ / 25

Criteria	Beginning (1)	Developing (2)	Achieving (3)	Confident (4)	Exceeding (5)
Equal sharing	Needs support.	Makes equal groups with prompts.	Makes equal shares accurately.	Explains and checks shares.	Applies sharing to new problems.
Grouping	Needs support.	Forms equal groups with prompts.	Finds the number of equal groups.	Chooses grouping strategies.	Creates grouping problems.
Arrays and addition	Needs support.	Counts arrays with prompts.	Lists arrays to repeated addition.	Uses arrays accurately.	Compares array strategies.
Leftovers and fractions	Needs support.	Finds leftovers or halves with prompts.	Solves leftover and halves tasks.	Explains leftovers, halves and quarters.	Applies ideas in new contexts.
Reasoning	Response is unclear.	Shows thinking with prompts.	Uses drawing or number sentences.	Explains a strategy clearly.	Justifies and compares strategies.

Teacher comment: _____

Introducing Division

Our Learning Goal

We are learning to share and group collections equally.

I can:

- make equal groups
- describe division with number words and pictures
- notice when there are leftovers



Is the Sharing Fair?

8 strawberries are shared between 2 children.

Deal one strawberry to each child until none remain.

Each child gets 4 strawberries.

8 shared into 2 equal groups is 4 in each group.



What Does Division Mean?

Division helps us split a collection into equal parts.

We can:

- share a total between a number of groups
- make groups of a certain size

Equal means every group has the same amount.



Share One at a Time

Share 12 counters between 3 plates.

1. Put one counter on each plate.
2. Keep dealing one at a time.
3. Stop when all 12 counters are dealt.

Each has 4 counters.



Make Equal Groups

Make groups of 5 from 15 counters.

Circle or move 5 counters into each group.

There are 3 equal groups.

$$15 = 5 + 5 + 5$$



Two Different Questions

How many groups?

Put 12 objects into groups of 3. $\rightarrow$ 4 groups

How many in each group?

Share 12 objects between 3 groups $\rightarrow$ 4 in each group

Read the question carefully



Four Equal Groups

Use 12 counters to make 4 equal groups.

Each group has 3 counters.

12 objects = 4 groups

$$12 \div 4 = 3$$



Connect to Repeated Addition

Equal groups connect division and repeated addition.

4 groups of 3:

$$3 + 3 + 3 + 3 = 12$$

So $12 \div 4 = 3$.



See Equal Groups in Arrays

An array shows equal rows and equal columns.

4 rows of 3 make 12.

Count by 3s: 3, 6, 9, 12

Arrays help us see equal groups quickly.



Group 18 in Threes

Put 18 counters into groups of 3.

Count groups: 3, 6, 9, 12, 15, 18

There are 6 groups.

$$18 \div 3 = 6$$



Sometimes There Are Leftovers

Share 14 counters equally between 4 plates.

Each plate gets 3 counters.

2 counters are left over.

$14 = 4 \text{ groups of } 3 + 2 \text{ leftovers.}$



Biscuits in Bags

17 biscuits are packed into bags of 5.

Make each bag exactly equal.

3 full bags can be made.

2 biscuits are left over.



Explain the Leftover

A leftover is an object that cannot join another equal group.

We name the equal groups first, then the leftover.

17 grouped in 5s = 3 full groups and 2 leftover.

The leftover must be smaller than the group size.



Equal Sharing Makes Halves

Sharing a collection into 2 equal groups makes halves.

Half of 12 is 6 because $6 + 6 = 12$.

Two halves make one whole.

Check: both groups must be equal.



Halve Again

Halve again to make smaller equal parts.

1 whole $\rightarrow$ 2 halves

2 halves $\rightarrow$ 4 quarters

4 quarters $\rightarrow$ 8 eighths

Each $\rightarrow$ splits into 2 equal parts.



Guided Practice

Try these with counters or drawings:

1. Share 16 between 4 groups.
2. Make groups of 5 from 20.
3. Share 13 between 3 groups. Note the remainder.
4. Find half of 10.

Explain how you know your groups are equal.





Introducing Division Quiz

Question 1 of 10

12 counters are shared equally between 3 plates.
How many counters go on each plate?

A. 3 B. 4 C. 5



Answer 1

B. 4

$12 \div 3 = 4$ because $4 + 4 + 4 = 12$.



Question 2 of 10

True or false?

15 objects placed into groups of 5 make 3 equal groups.



Answer 2

TRUE

$5 + 5 + 5 = 15$, so there are 3 equal groups.



Question 3 of 10

18 counters are placed into 6 equal groups.

How many counters are in each group?



Answer 3

3 counters

$$18 \div 6 = 3.$$



Question 4 of 10

Which repeated addition sentence shows 4 groups of 3?

A. $4 + 4 + 4$

B. $3 + 3 + 3 + 3$

C. $3 + 4$



Answer 4

B. $3 + 3 + 3 + 3$

Four equal groups each containing 3.



Question 5 of 10

An array has 3 rows with 5 dots in each row.

How many dots are there altogether?



Answer 5

15 dots

$$5 + 5 + 5 = 15.$$



Question 6 of 10

True or false?

14 objects can be placed into groups of 4 with no leftovers.



Answer 6

FALSE

There are 3 full groups of 4 and 2 objects left over



Question 7 of 10

17 biscuits are packed into bags of 5.

What happens?

- A. 2 bags, 7 left
- B. 3 bags, 2 left
- C. 4 bags, no left



Answer 7

B. 3 bags, 2 left

$5 + 5 + 5 = 15$, with 2 biscuits left over.



Question 8 of 10

What is half of 12?

PREVIEW



Answer 8

6

Two equal groups of 6 make 12

PREVIEW



Question 9 of 10

A whole is split into 4 equal parts.

What is each part called?

A. a half B. a quarter C. one eighth



Answer 9

B. a quarter

Four equal quarters make one whole.



Question 10 of 10

True or false?

Halving a whole, then halving again, then halving once more makes eighths.



Answer 10

TRUE

1 whole $\rightarrow$ 2 halves $\rightarrow$ 4 quarters $\rightarrow$ 8 eighths



