

Lesson 14– Multiplication & Division – Make Equal Groups - Grouping

NC Objective:
Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers

Resources needed:
Differentiated Sheets
Teaching Slides
Concrete manipulatives

Vocabulary:
Division, multiplication, repeated addition, groups, total

Children divide by making equal groups. They then count on to find the total number of groups. They need to do this using concrete manipulatives and pictorially in a variety of contexts. They need to recognise the link between division, multiplication and repeated addition.

Key Questions:

How many do you have to begin with? How many are in each group? How many groups can you make? How long should your number line be? What will you count up in?
___ groups of ___ make ___.

★ Working Towards

★★ Working Within

★★★ Greater Depth

Use grouping to solve the division problems.

Sweets come in packs of 30. You need to put 5 in each jar. How many jars will you need?
Group the sweets to find the answer.

Pencils come in packs of 24. You need to put 2 in each pot. How many pots will you need?
Group the pencils to find the answer.

Leanna has 15 tags. She puts 3 tags in each box. How many boxes can she fill?

Tia has 40 coins. She puts 10 coins in each pouch. How many pouches can she fill?

Use a number line to work out how many equal groups of 3 you can make from 30.

Use a number line to work out how many equal groups of 5 you can make from 30.

Use grouping to solve the division problems.

Sweets come in packs of 30. You need to put 5 in each jar. How many jars will you need?
There are ___ sweets altogether. There are ___ sweets in each jar. There are ___ jars.

Pencils come in packs of 24. You need to put 2 in each pot. How many pots will you need?
There are ___ pencils altogether. There are ___ pencils in each pot. There are ___ pots.

Leanna has 15 tags. She puts 3 tags in each box. How many boxes can she fill?
Write the multiplication and division sentence this represents.

Tia has 40 coins. She puts 10 coins in each pouch. How many pouches can she fill?
Write the multiplication and division sentence this represents.

Use a number line to work out how many equal groups of 3 you can make from 30.

Use a number line to work out how many equal groups of 5 you can make from 30.

Cut out the questions. Show all of the steps of your working out.

Sweets come in packs of 20. I have 4 packs. I need to put 10 sweets in a jar. How many jars will I need?

Pencils come in packs of 24. I have 3 packs and need to put 2 in a pot. How many pots will I need?

Leanna has 15 cars, 12 teddies and 5 DVDs. She puts them in 6 boxes. Can there be an equal amount of toys in each? Explain your answer.

Tia has 63 gold coins, 25 bronze coins and 12 silver coins. She takes half of the total amount and wants to put 10 coins in a pouch. How many pouches will she need?

Children divide by grouping. They use the images and group directly on the worksheet.

Children on this sheet cut out their problems and show grouping by drawing in their books. They show multiplication and division calculations.

Children on this sheet are efficient in division. They solve complex word problems with more than one step to do before they reach the answer.

Reasoning & Problem Solving

Grouping Reasoning & Problem Solving 2

Zach has some counters. He makes 5 equal groups. The amount he started with is greater than 10 but less than 25. How many counters could he have started with? How many will be in each group?

Grouping Reasoning & Problem Solving 2

Zach has some counters. He makes 6 equal groups. The amount he started with is greater than 10 but less than 40. How many counters could he have started with? How many will be in each group?

Grouping Reasoning & Problem Solving 2

Zach has some counters. He makes 7 equal groups. The amount he started with is greater than 22 but less than 51. How many counters could he have started with? How many will be in each group?

Use grouping to solve the division problems.

Sweets come in packs of 20.
You need to put 5 in each jar.

How many jars will you need?

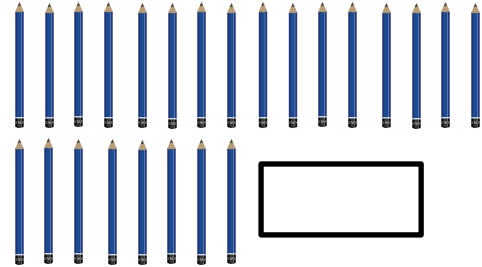
Group the sweets to find the answer.



Pencils come in packs of 24.
You need to put 2 in each pot.

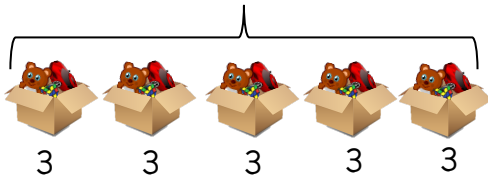
How many pots will you need?

Group the pencils to find the answer.



Leanna has 15 toys.

She puts 3 toys in each box.
How many boxes can she fill?

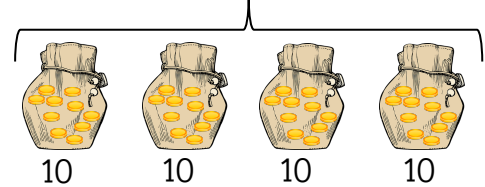


$$\square \div \square = \square$$

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

Tia has 40 coins.

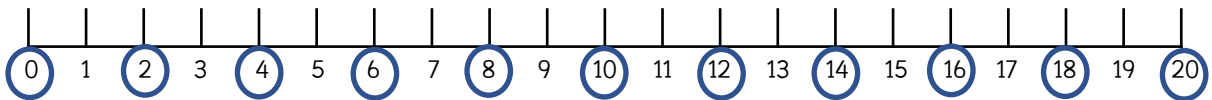
She puts 10 coins in each pouch.
How many pouches can she fill?



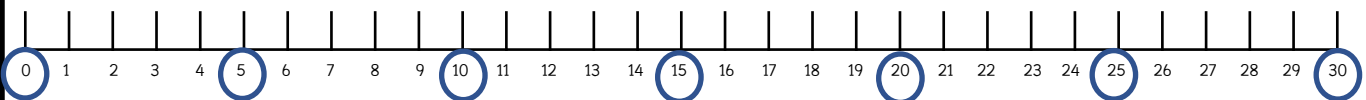
$$\square \div \square = \square$$

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

Use a number line to work out how many equal groups of 2 you can make from 20.



Use a number line to work out how many equal groups of 5 you can make from 30.

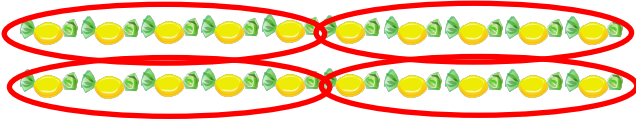


Use grouping to solve the division problems.

Sweets come in packs of 20.
You need to put 5 in each jar.

How many jars will you need?

Group the sweets to find the answer.

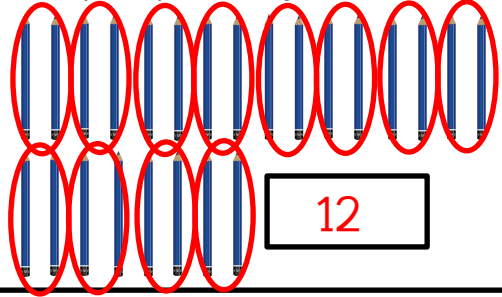


4

Pencils come in packs of 24.
You need to put 2 in each pot.

How many pots will you need?

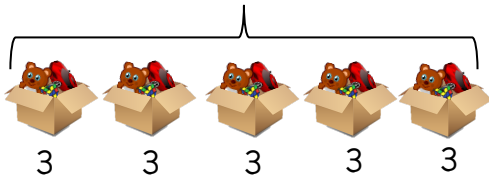
Group the pencils to find the answer.



12

Leanna has 15 toys.

She puts 3 toys in each box.
How many boxes can she fill? **5**

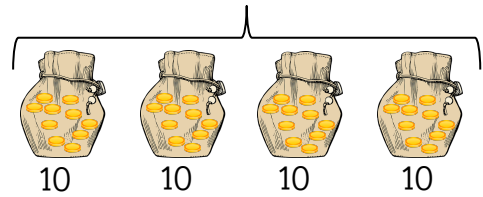


$$15 \div 3 = 5$$

$$5 \times 3 = 15$$

Tia has 40 coins.

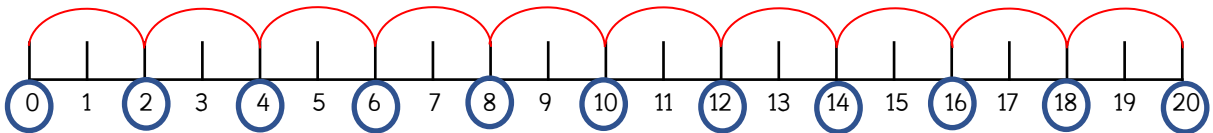
She puts 10 coins in each pouch.
How many pouches can she fill? **4**



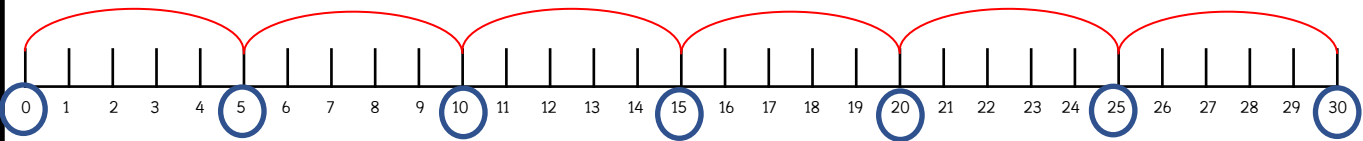
$$40 \div 10 = 4$$

$$4 \times 10 = 40$$

Use a number line to work out how many equal groups of 2 you can make from 20. **10**



Use a number line to work out how many equal groups of 5 you can make from 30. **6**





Use grouping to solve the division problems. Show all of your calculations.

Sweets come in packs of 20.
You need to put 5 in each jar.

How many jars will you need?

There are ___ sweets altogether.

There are ___ sweets in each jar.



There are ___ jars.

Pencils come in packs of 24.
You need to put 2 in each pot.

How many pots will you need?

There are ___ pencils altogether.

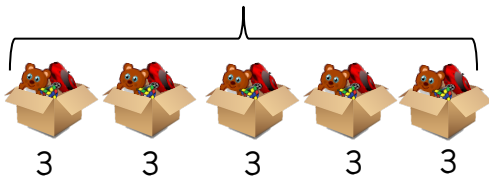
There are ___ pencils in each pot.



There are ___ pots.

Leanna has 15 toys.

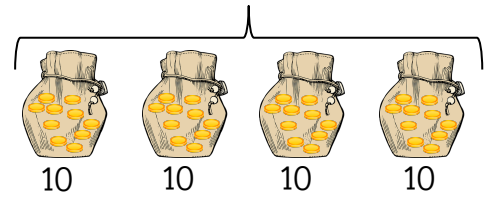
She puts 3 toys in each box.
How many boxes can she fill?



Write the multiplication and division sentence
this represents.

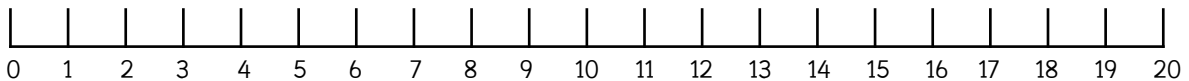
Tia has 40 coins.

She puts 10 coins in each pouch.
How many pouches can she fill?



Write the multiplication and division sentence
this represents.

Use a number line to work out how many equal
groups of 2 you can make from 20.



Use a number line to work out how many equal
groups of 5 you can make from 30.





Use grouping to solve the division problems. Show all of your calculations.

Sweets come in packs of 20.
You need to put 5 in each jar.

How many jars will you need?

4

There are 20 sweets altogether.

There are 5 sweets in each jar.



There are 4 jars.
 $20 \div 5 = 4$

Pencils come in packs of 24.
You need to put 2 in each pot.

How many pots will you need?

12

There are 24 pencils altogether.

There are 2 pencils in each pot.

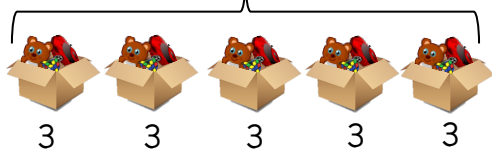


There are 12 pots.
 $24 \div 2 = 12$

Leanna has 15 toys.

She puts 3 toys in each box.
How many boxes can she fill? 5

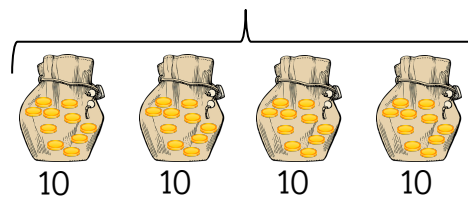
$15 \div 3 = 5$ $5 \times 3 = 15$



Write the multiplication and division sentence this represents.

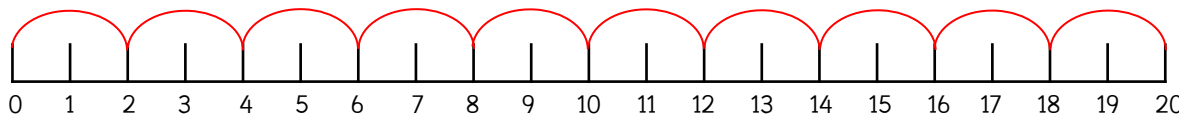
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She puts 10 coins in each pouch.
How many pouches can she fill? 4

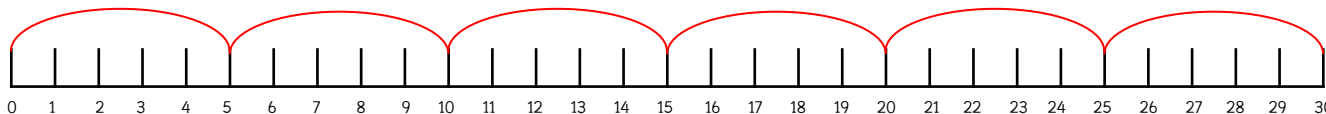


$40 \div 10 = 4$ $4 \times 10 = 40$
Write the multiplication and division sentence this represents.

Use a number line to work out how many equal groups of 2 you can make from 20. 10



Use a number line to work out how many equal groups of 5 you can make from 30. 6





Cut out the questions.
Show all of the steps of your working out.

Sweets come in packs of 20.

I have 4 packs. I need to put 10 sweets in a jar.



How many jars will I need?

Pencils come in packs of 24.

I have 3 packs and need to put 2 in a pot.



How many pots will I need?

Leanna has 15 cars, 12 teddies and 5 DVDs.

She puts them in 6 boxes.

Can there be an equal amount of toys in each?

Explain your answer.



Tia has 63 gold coins, 25 bronze coins and 12 silver coins. She takes half of the total amount and wants to put 10 coins in a pouch.



How many pouches will she need?



Cut out the questions.
Show all of the steps used.

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How many pouches will she need?





Cut out the questions.
Show all of the steps used.

Sweets come in packs of 20.

I have 4 packs. I need to put 10 sweets in a jar.



How many jars will I need?

8

$$80 \div 10 = 8$$



Pencils come in packs of 24.

I have 3 packs and need put 2 in a pot.



How many pots will I need?

36

$$72 \div 2 = 36$$

Leanna has 15 cars, 12 teddies and 5 DVDs.

She puts them in 6 boxes.

Can there be an equal amount of toys in each?

Explain your answer.



No, because 32 cannot be divided by 6 equally.

Tia has 63 gold coins, 25 bronze coins and 12 silver coins. She takes half of the total amount and wants to put 10 coins in a pouch.



How many pouches will she need?

5

$$50 \div 10 = 5$$



Cut out the questions.
Show all of the steps used.

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How many pouches will she need?

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$$50 \div 10 = 5$$



Zach has some counters.
He makes 5 equal groups.

The amount he started with
is greater than 10 but less than 25.

How many counters could he
have started with?
How many will be in each group?



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Answers

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He makes 5 equal groups.

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He could have
20 counters in 5 groups of 4,
15 counters in 5 groups of 3.

Answers

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Answers

Zach has some counters.
He makes 6 equal groups.

The amount he started with
is greater than 10 but less than 40.

How many counters could he
have started with?
How many will be in each group?



He could have
36 counters in 6 groups of 6,
30 counters in 6 groups of 5,
24 counters in 6 groups of 4,
18 counters in 6 groups of 3,
12 counters in 6 groups of 2.

Answers

Zach has some counters.
He makes 6 equal groups.

The amount he started with
is greater than 10 but less than 40.

How many counters could he
have started with?
How many will be in each group?



He could have
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How many will be in each group?



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Answers

Zach has some counters.
He makes 7 equal groups.

The amount he started with
is greater than 22 but less than 51.

How many counters could he
have started with?
How many will be in each group?



He could have
28 counters in 7 groups of 4,
35 counters in 7 groups of 5,
42 counters in 7 groups of 6,
49 counters in 7 groups of 7.

Answers

Zach has some counters.
He makes 7 equal groups.

The amount he started with
is greater than 22 but less than 51.

How many counters could he
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How many will be in each group?



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