

Finding Quarters of Amounts



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Quality Standard
Approved

Important Words

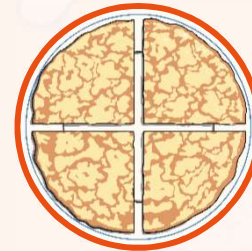
number

figures we use to count

1 2 3
4 5 6 7
8 9 10

a quarter

split into 4 equal groups



equal

the same amount



Finding a Quarter ($\frac{1}{4}$)

You need to divide by 4 to find one quarter.

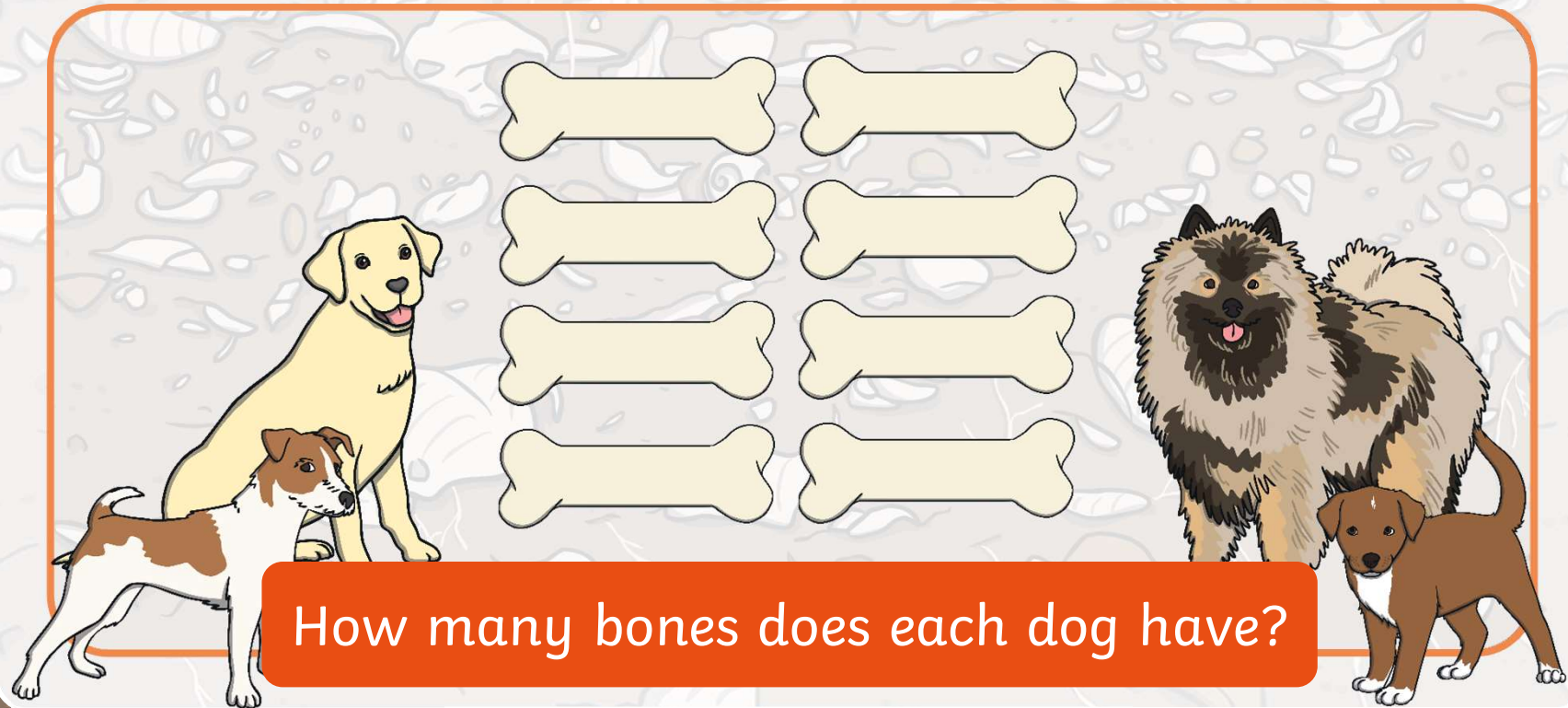
Count the number of bones.



Finding a Quarter ($\frac{1}{4}$)

There are 8 bones.

Divide the bones between the four dogs so that they have the same number each.



The illustration shows four dogs of different breeds: a yellow dog, a brown and white dog, a large shaggy dog, and a small brown dog. In the center, there are eight yellow bones arranged in two columns of four. Below the bones, a red banner contains the question: "How many bones does each dog have?"

Finding a Quarter ($\frac{1}{4}$)

How many bones does each dog have?

So, one quarter of 8 is 2.

$$\frac{1}{4} \text{ of } 8 = 2$$



Which Strategies Can I Use to Find One Quarter ($\frac{1}{4}$)?

There are twelve cakes. I share them equally between four friends. How many cakes does each friend get?



What is $\frac{1}{4}$ of 12?

Draw Groups

Share the cakes equally into four groups.



Halve and Halve Again

Find half

Find half again

What is $\frac{1}{2}$ of 12?

$$12 \div 2 = 6$$

What is $\frac{1}{2}$ of 6?

$$6 \div 2 = 3$$

Answer: $\frac{1}{4}$ of 12 = 3



Use the Inverse

Multiplication is the inverse of division.

$$12 \div 4 = \square$$

$$\square \times 4 = 12$$

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

$$3 \times 4 = 12$$



Problem Solving

Now, choose a strategy to solve these problems.

What is $\frac{1}{4}$ of 4?

$$\frac{1}{4} \text{ of } 4 = 1$$

What is $\frac{1}{4}$ of 16?

$$\frac{1}{4} \text{ of } 16 = 4$$

What is $\frac{1}{4}$ of 20?

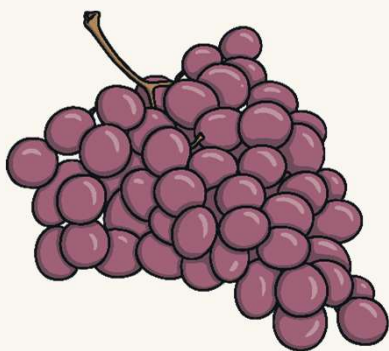
$$\frac{1}{4} \text{ of } 20 = 5$$

Which strategy did you use? Discuss.



Problem Solving

Lexi had 20 grapes.
She gave a quarter of them to Sam.
How many did Sam get?



Answer

Which strategy did you use? Discuss.

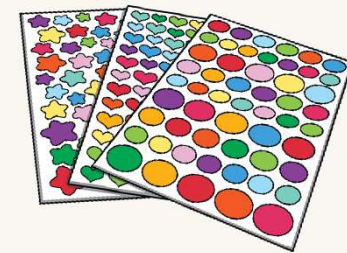


Problem Solving

Miss Jones had 24 stickers.
She shared them equally with four children.
How many stickers did each child get?



Answer

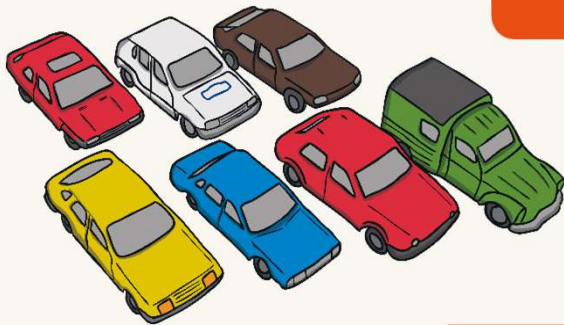


Which strategy did you use? Discuss.

Problem Solving

Rishi had 40 cars.
 $\frac{1}{4}$ of the cars were red.
How many cars were red?

Answer



Which strategy did you use? Discuss.

Challenge Section

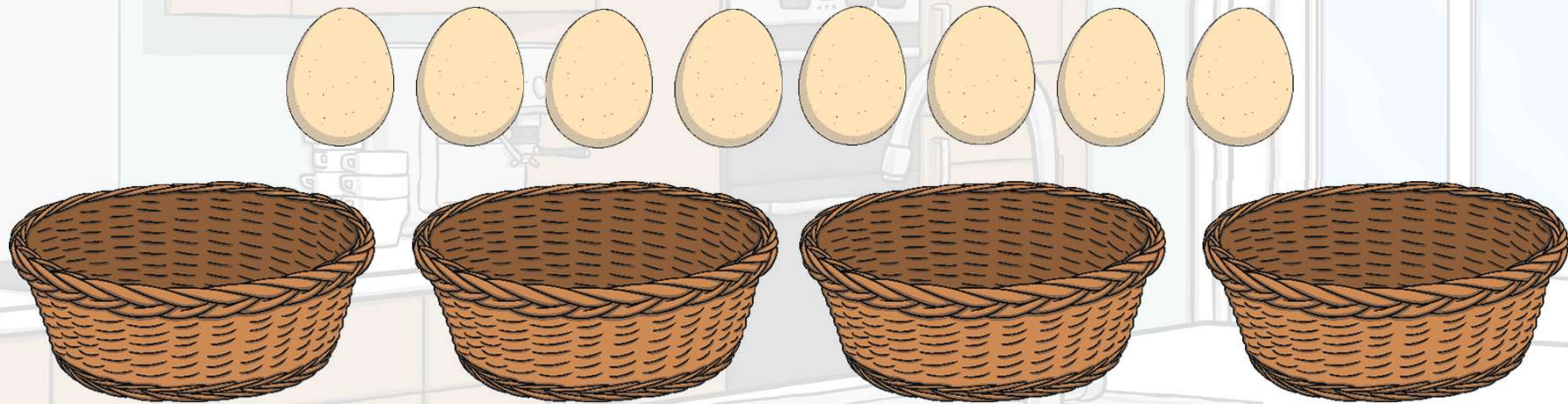
If you have found it easy to find one quarter, try these next few challenges!



Finding Three Quarters ($\frac{3}{4}$)

You know how to find one quarter so now let's look at finding three quarters.

First, find $\frac{1}{4}$.

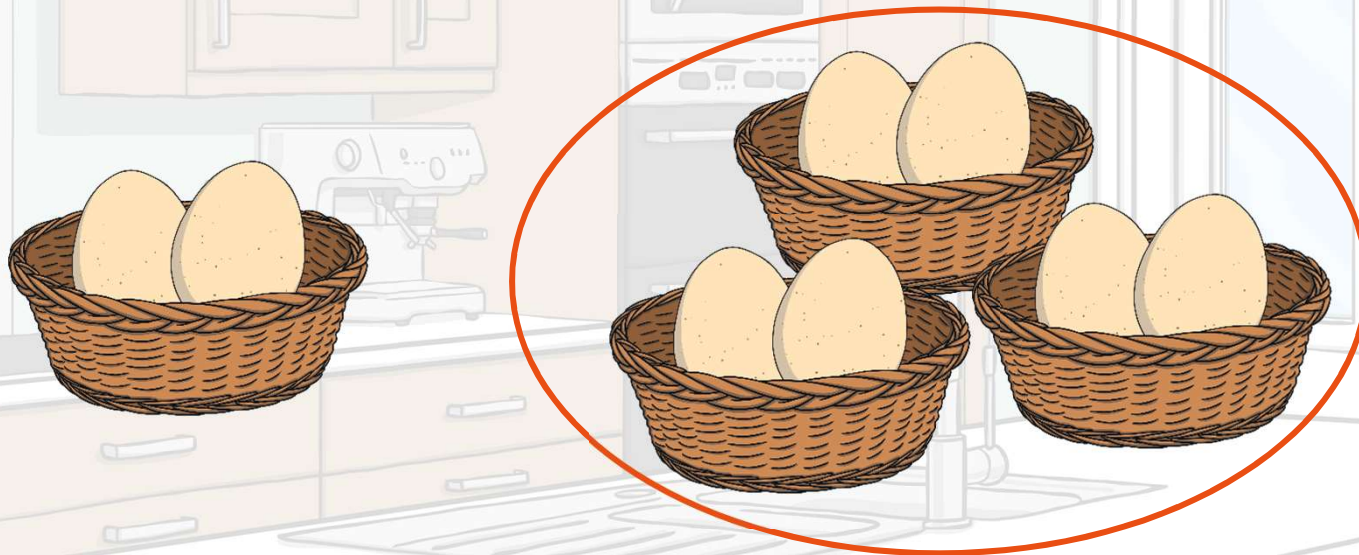


There are 8 eggs. If we divide these eggs between 4 baskets, how many eggs will be in each basket?

Finding Three Quarters ($\frac{3}{4}$)

There will be 2 eggs in each basket because $\frac{1}{4}$ of 8 = 2

To find three quarters, simply count the total number of eggs in 3 of the baskets.



There are 6 eggs in the 3 baskets, so $\frac{3}{4}$ of 8 = 6.

Problem Solving

What is $\frac{3}{4}$ of 4?

$$\frac{1}{4} \text{ of } 4 = 1$$

$$1 \times 3 = 3$$

so
 $\frac{3}{4} \text{ of } 4 = 3$

What is $\frac{3}{4}$ of 12?

$$\frac{1}{4} \text{ of } 12 = 3$$

$$3 \times 3 = 9$$

so
 $\frac{3}{4} \text{ of } 12 = 9$

What is $\frac{3}{4}$ of 16?

$$\frac{1}{4} \text{ of } 16 = 4$$

$$4 \times 3 = 12$$

so
 $\frac{3}{4} \text{ of } 16 = 12$

Problem Solving

Sami had 20 marbles.
He gave three quarters of them to Sam.
How many did Sam get?



$$\frac{1}{4} \text{ of } 20 = 5$$

$$5 \times 3 = 15$$

$$\frac{3}{4} \text{ of } 20 = 15$$



