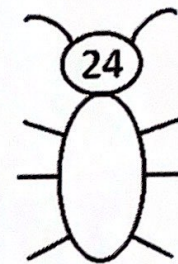


Key Learning: To multiply and divide using knowledge of factors.

Using factors to multiply

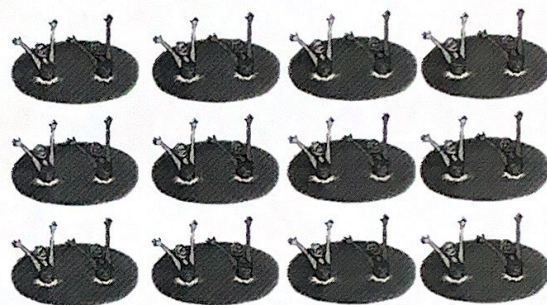
**There are 24 swimmers in each squad
and there are six squads.
How many swimmers in total?**



Strategy 1:

Each squad has 12 pairs.
How many pairs in six squads?

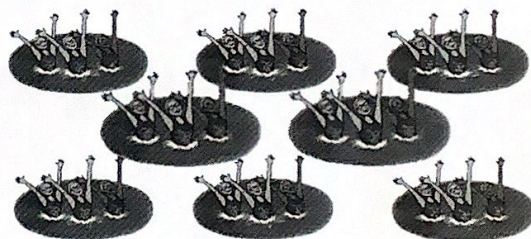
An image of one squad:



Strategy 2:

Each squad has four groups of six swimmers.
How many groups in six squads?

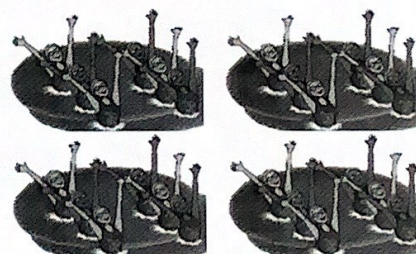
An image of one squad:



Strategy 3:

Each squad has eight groups of three swimmers.
How many groups in six squads?

An image of one squad:



How many other ways can you use factors to solve the problem?



**Mathematics
Mastery**

Y5 U4 L11 Let's Explore

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Key Learning: To multiply and divide using knowledge of factors.

Complete the multiplication equations using a range of strategies, including using knowledge of factors. Use concrete manipulatives to demonstrate each strategy, jottings or pictorial representations.

There are 7 squads with 36 swimmers in each. How many swimmers are there in total?

$$36 \times 7$$

There are 24 athletes staying on each floor of an apartment block.
How many athletes are there on 9 floors?

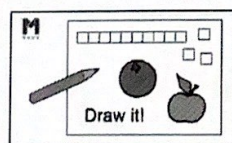
$$24 \times 9$$

Helpful starting point

Use the pictorial representation, multiplication facts and factor bugs provided as a starting point.

Challenge

Decide which strategy you prefer for each calculation and give reasons for why.



$$45 \times 6$$



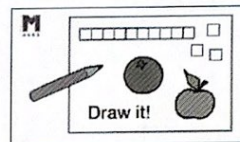
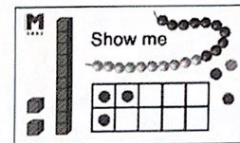
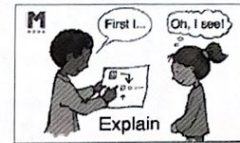
**Mathematics
Mastery**

Y5 U4 L11 Independent Task
Prompt Sheet

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Key Learning: To multiply and divide using knowledge of factors.

Find me another way



How many different ways can you use your knowledge of multiplication and derived facts to calculate this?

$$48 \times 8 =$$

Which manipulatives or drawings would help explain your strategy?



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Mastery

Y5 U4 L11 Independent Task
Increased Challenge (ii)

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Key Learning: To use multiples to divide

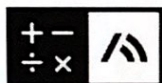
Speedy multiples

× 1	15
× 2	
× 4	
× 8	
× 10	

× 1	24
× 2	
× 4	
× 8	
× 10	

× 1	32
× 2	
× 4	
× 8	
× 10	

× 1	45
× 2	
× 4	
× 8	
× 10	



Mathematics
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Y5 U4 L12 Do Now task

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Key Learning: To use multiples to divide

Speedy multiples

× 1	15
× 2	
× 4	
× 8	
× 10	

× 1	24
× 2	
× 4	
× 8	
× 10	

× 1	32
× 2	
× 4	
× 8	
× 10	

× 1	45
× 2	
× 4	
× 8	
× 10	



Mathematics
Mastery

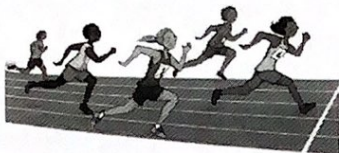
Y5 U4 L12 Do Now task

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Key Learning: To use multiples to divide

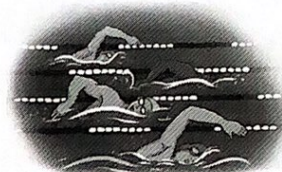
Multiplication problems

Represent each problem with an area model and then partition and calculate each part. Record the steps of the strategy on an empty number line.

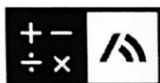


There are six athletes in each race and 252 athletes competed in total. How many races were there?

There are nine swimmers in each race and 162 swimmers competed in total. How many races were there?



There are 60 athletes on each floor of an apartment block. There are 1920 athletes in the whole block. How many floors are there?



Mathematics
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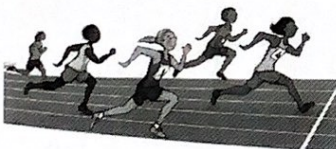
Y5 U4 L12Talk Task

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Key Learning: To use multiples to divide

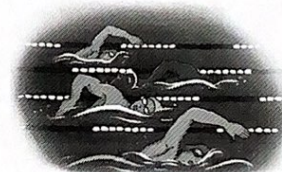
Multiplication problems

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Y5 U4 L12Talk Task

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Key Learning: To use multiples to divide.

Hunting for multiples

Each of these numbers is a multiple of 15, 24, 32 or 45. Some may be multiples of more than one of these. Which number is a multiple of which?

930

× 1	15
× 2	30
× 3	45
× 4	
× 5	75
× 6	
× 7	105
× 8	120
× 9	
× 10	
× 20	
× 30	
× 40	
× 50	
× 60	
× 70	
× 80	
× 90	

672

× 1	24
× 2	
× 3	72
× 4	
× 5	120
× 6	
× 7	168
× 8	192
× 9	216
× 10	
× 20	
× 30	
× 40	
× 50	
× 60	
× 70	
× 80	
× 90	

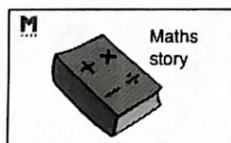
792

× 1	32
× 2	64
× 3	
× 4	128
× 5	160
× 6	192
× 7	
× 8	
× 9	288
× 10	
× 20	
× 30	
× 40	
× 50	
× 60	
× 70	
× 80	
× 90	

1890

× 1	45
× 2	90
× 3	
× 4	
× 5	
× 6	270
× 7	315
× 8	
× 9	405
× 10	
× 20	
× 30	
× 40	
× 50	
× 60	
× 70	
× 80	
× 90	

Find other numbers that are multiple of **two or more** of 15, 24, 32 and 45.



$$930 \div 15 = 62$$

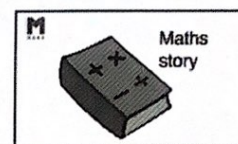


**Mathematics
Mastery**

Y5 U4 L12 Independent Task
Increased Challenge

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Key learning: To use a written method to divide



- Estimate and then find the answer to each calculation.
- Then use short division to check if your answer is reasonable.
- Create a maths story for each calculation.

$$9,447 \div 3$$

$$9,378 \div 9$$

$$6,870 \div 6$$

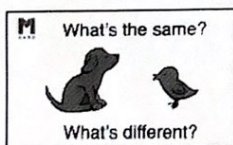
$$1,694 \div 7$$

Helpful starting point

Use the pictorial representations supplied to support you with calculating.

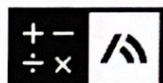
Challenge

Create your own division calculations that require regrouping.



$$9,369 \div 3$$

$$6,879 \div 3$$



**Mathematics
Mastery**

Y5 U4 L13 Independent Task
Prompt Sheet

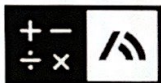
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Key Learning: To solve problems involving division with remainders.

Division with remainders

Discuss appropriate answers for the first two problems. Then create two problems for the second equation where the remainder is interpreted differently.

The apartments in the Olympic village hold six people each. There are 50 people. How many apartments are needed?	$50 \div 6 =$	The apartments in the Olympic village hold six people each. There are 50 people. How many full apartments will there be?
	$34 \div 5 =$	



Mathematics
Mastery

Y5 U4 L14 Talk Task

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Key Learning: To solve problems involving division with remainders.

Division with remainders

Discuss appropriate answers for the first two problems. Then create two problems for the second equation where the remainder is interpreted differently.

The apartments in the Olympic village hold six people each. There are 50 people. How many apartments are needed?	$50 \div 6 =$	The apartments in the Olympic village hold six people each. There are 50 people. How many full apartments will there be?
	$34 \div 5 =$	



Mathematics
Mastery

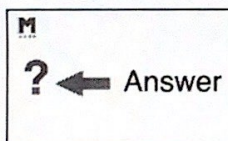
Y5 U4 L14 Talk Task

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Key Learning: To solve problems involving division with remainders.

Division with remainders

Solve these problems, interpreting remainders correctly	Solve these calculations and then write a Maths story for each
The apartments in the Olympic village hold six people each. There are 1352 people. How many apartments are needed?	$4361 \div 5 =$
950 Olympic medals are packed into boxes of nine. How many full boxes will there be?	$1562 \div 7 =$
An arena has rows with 12 seats in each. 650 spectators fill the seats in full rows from the front. How many rows will have people in them? How many full rows will there be?	$746 \div 8 =$



The answer is: 42 taxis are needed.
What could the question be?
Write an equation and a worded problem.
Now try and write a different one.

