

# DIVISION – DAY 5

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

# STARTER

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

Which one doesn't belong?

★

$$404 \div 3$$

★

$$673 \div 5$$

★

$$806 \div 6$$

★

$$538 \div 4$$

Explain your answer.

# STARTER

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

Which one doesn't belong?

★

$$404 \div 3$$

★

$$673 \div 5$$

★

$$806 \div 6$$

★




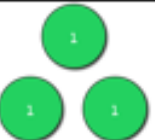
$$538 \div 4$$

673 ÷ 5 doesn't belong as it has a result of 134 r 3, whereas the other division calculations listed all have results of 134 r 2.

# FLUENCY

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

Use counters and a place value chart to calculate  $2,473 \div 2$ .



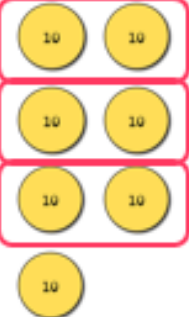

thousands	hundreds	tens	ones
			

2	2	4	7	3	

# FLUENCY

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

Use counters and a place value chart to calculate  $2,473 \div 2$ .





thousands	hundreds	tens	ones
			

2	2	4	7	3	

# FLUENCY

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

Use counters and a place value chart to calculate  $8,934 \div 4$ .

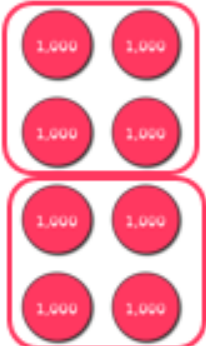
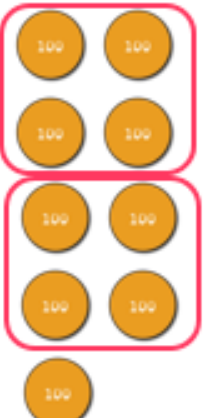
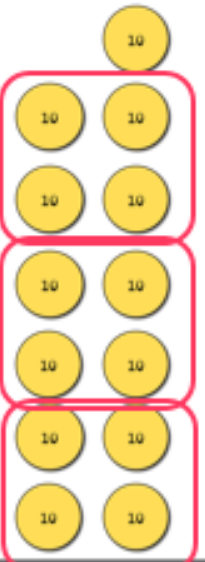

thousands	hundreds	tens	ones
			

4	8	9	3	4	

# FLUENCY

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

Use counters and a place value chart to calculate  $8,934 \div 4$ .

thousands	hundreds	tens	ones
			

4	8	9	3	4	

# FLUENCY

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders


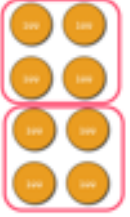
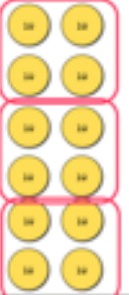

Use counters and a place value chart to calculate:

a)  $2,715 \div 2$

b)  $9,111 \div 4$

c)  $9,839 \div 3$

d)  $9,368 \div 5$

thousands	hundreds	tens	ones
			

	2	2	3	3	r 2
4	8	9	3	4	

# FLUENCY

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders



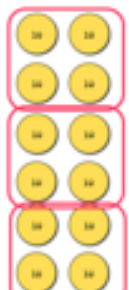

Use counters and a place value chart to calculate:

a)  $2,715 \div 2 = \underline{1,357} \text{ r } 1$

b)  $9,111 \div 4 = \underline{2,277} \text{ r } 3$

c)  $9,839 \div 3 = \underline{3,279} \text{ r } 2$

d)  $9,368 \div 5 = \underline{1,873} \text{ r } 3$

thousands	hundreds	tens	ones
			

	2	2	3	3	r 2
4	8	9	3	4	

# PROBLEM SOLVING

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

An aquarium has 5,391 fish.

- ★ The aquarium is being moved, so they need to pack all the fish into fish tanks. Each fish tank can hold a maximum of four fish.

a) How many tanks will be needed to transport all of the fish?

b) How many fish tanks will be full?

★  
Explain your answers.

# PROBLEM SOLVING

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

An aquarium has 5,391 fish.

- ★ The aquarium is being moved, so they need to pack all the fish into fish tanks. Each fish tank can hold a maximum of four fish.

- a) How many tanks will be needed to transport all of the fish?  
1,348 tanks are required as  $5,381 \div 4 = 1,347 \text{ r } 3$ . One more than 1,347 tanks are required to ensure all the fish are transported safely.
- b) How many fish tanks will be full?  
1,347 tanks will be full as  $5,381 \div 4 = 1,347 \text{ r } 3$ . Meaning one extra tank will be used to transport the remaining three fish.

# PROBLEM SOLVING

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

A town with a population of 8,627 has been flooded.

★ The government are sending emergency rafts to rescue the town.

If each raft holds six people and each raft is only supposed to be used once...

a) How many rafts will be needed to fully evacuate the town?

b) How many rafts will transport six people?

★ Explain your answers.

# PROBLEM SOLVING

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

A town with a population of 8,627 has been flooded.

★ The government are sending emergency rafts to rescue the town's residents.  
If each raft holds six people and each raft is only supposed to be used once...

- a) How many rafts will be needed to fully evacuate the town?  
1,438 rafts must be sent as  $8,627 \div 6 = 1,437 \text{ r } 5$ . One more than 1,437 is require to ensure all the people are evacuated.
- b) How many rafts will transport six people?  
1,437 rafts will transport six people as  $8,627 \div 6 = 1,437 \text{ r } 5$ . Therefore, one raft will transport five people.

# PROBLEM SOLVING

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

For the calculation  $7,038 \div 5$  write number stories where:

- a) Write a question where the answer means the quotient is rounded up.
- b) Write a question where the answer means the quotient is rounded down.
- c) Write a question where the answer means quoting the remainder itself.

# PROBLEM SOLVING

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

For the calculation  $7,038 \div 5$  write number stories where:

★ Example questions: Teacher / peer assessment

- a) A bakery bakes 7,038 cookies per day and puts them into bags of five cookies. How many bags each day are used in total? 1,408 bags are used each day.
- b) A bakery bakes 7,038 cookies per day and puts them into bags of five cookies. How many bags of five cookies do they produce each day? 1,407 bags of five.
- c) A bakery bakes 7,038 cookies per day and puts them into bags of five cookies. Apart from five, what other amounts of cookies are within a bag at the end of each day? 1,407 bags of five and one bag holding three cookies.

# PROBLEM SOLVING

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

★ Ruth says, "If you divide a 3-digit number that has digits in ascending order by a single-digit number that is the following digit, you will receive a remainder. For example  $123 \div 4 = 30 \text{ r } 3$ ."

Is Ruth's statement sometimes, always or never true?  
Explain your answer.

# PROBLEM SOLVING

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

★ Ruth says, "If you divide a 3-digit number that has digits in ascending order by a single-digit number that is the following digit, you will receive a remainder. For example  $123 \div 4 = 30 \text{ r } 3$ ."

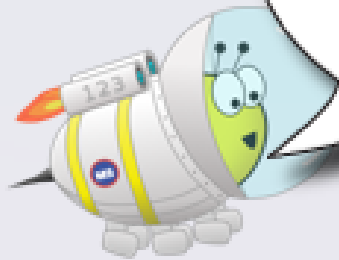
Ruth's statement is always true as:

- $234 \div 5 = 46 \text{ r } 4$
- $345 \div 6 = 57 \text{ r } 3$
- $456 \div 7 = 65 \text{ r } 1$
- $567 \div 8 = 70 \text{ r } 7$
- $678 \div 9 = 75 \text{ r } 3$

# REASONING

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

Evaluation:



When dividing a 4-digit number by a 1-digit, a remainder is worth one less than the divisor.

Is Astrobee's statement always, sometimes or never true?  
Explain your answer.

# REASONING

L.O. I can divide 4 digit numbers by 1 digit numbers with remainders

## Evaluation:



When dividing a 4-digit number by a 1-digit, a remainder is worth one less than the divisor.

Astrobee's statement is sometimes true. For example, if you calculate  $9,111 \div 4 = 2,277 \text{ r } 3$ , the remainder is one less than the divisor as  $4 - 1 = 3$ . However, when you calculate  $9,368 \div 5 = 1,873 \text{ r } 3$ , the remainder is two less than the divisor as  $5 - 2 = 3$ .