

RECALL

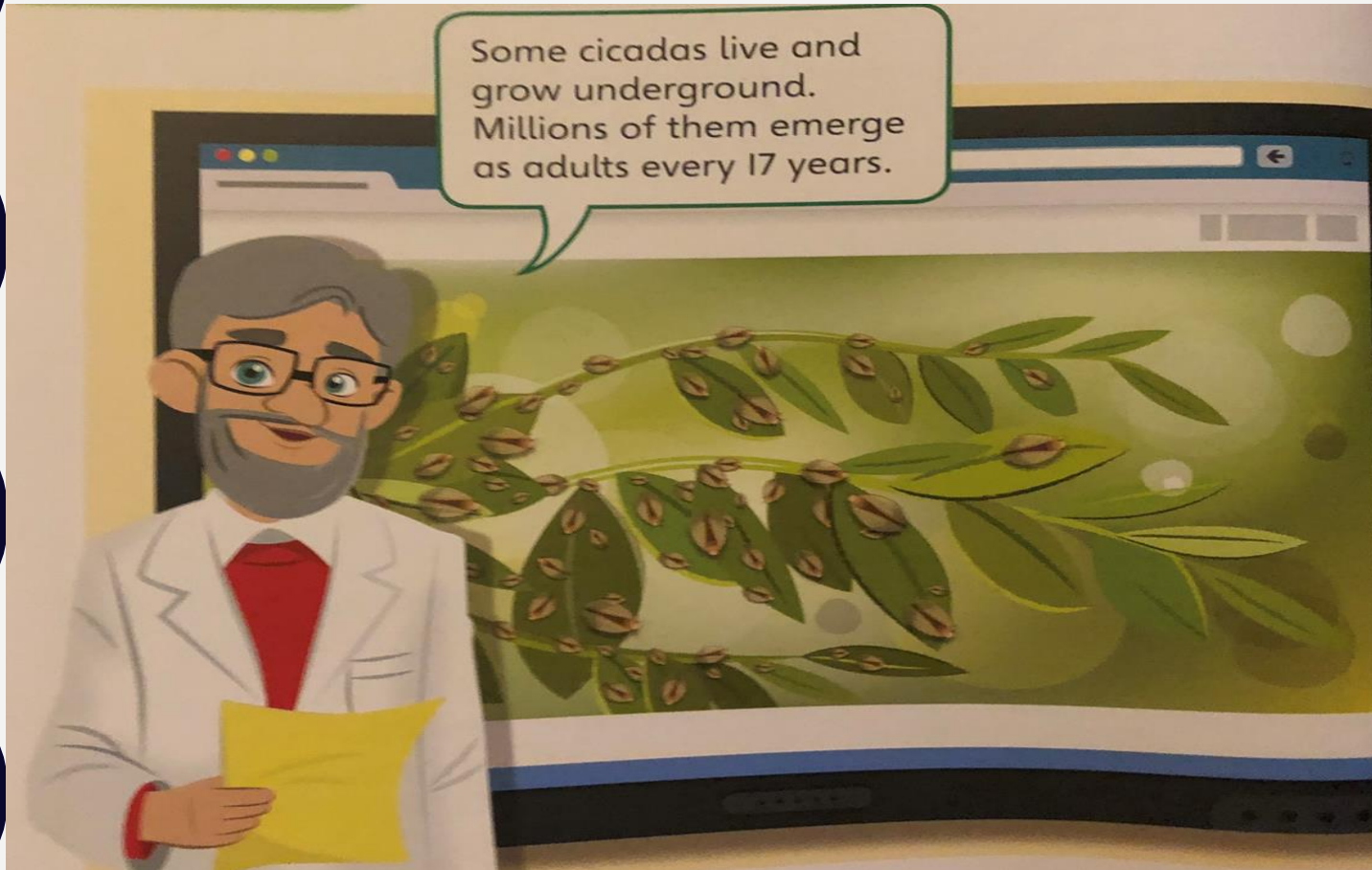
$$9 \overline{) 3744}$$

$$25 \overline{) 4465}$$

L.O. DIVIDE NUMBERS UP TO 4 DIGITS BY A 2-DIGIT NUMBER
USING THE FORMAL WRITTEN METHOD OF SHORT DIVISION,
INTERPRETING REMAINDERS ACCORDING TO THE CONTEXT.

- **SOME WILL EVEN:** Explain my method.
- **SOME WILL:** Check answer using short/long division.
- **MOST WILL:** Use known multiplication facts to aid calculation.
- **ALL WILL:** Use diagrams to help divide.

GUIDED PRACTICE



1 a) A scientist finds that cicadas have emerged this year. How many times will they emerge again over the next 100 years?

b) How many times will they emerge over the next 200 years?

help

Use bar modelling / long division to help you.



APE

GUIDED PRACTICE



1 a) The race is split into 25 equal stages. How long in km is each stage?

b) How would you deal with a remainder to get an accurate answer in this situation?

help

Use bar modelling / long division to help you.



APE

Intelligent Practise



$$8 \overline{)4593}$$

$$5 \overline{)3901}$$

$$3 \overline{)8288}$$

$$6 \overline{)1291}$$

$$9 \overline{)2210}$$

$$5 \overline{)8302}$$



$$24 \overline{)7589}$$

$$31 \overline{)8781}$$

$$38 \overline{)3289}$$

$$46 \overline{)4028}$$

$$16 \overline{)9482}$$

$$56 \overline{)8492}$$



How do you think you would solve a division sum where you are dividing by a three digit number??? Explain using maths.



$$\begin{array}{r} 574\text{r}1 \\ 8 \overline{)4593} \end{array}$$

$$\begin{array}{r} 780\text{r}1 \\ 5 \overline{)3901} \end{array}$$

$$\begin{array}{r} 2762\text{r}2 \\ 3 \overline{)8288} \end{array}$$

$$\begin{array}{r} 215\text{r}1 \\ 6 \overline{)1291} \end{array}$$

$$\begin{array}{r} 245\text{r}5 \\ 9 \overline{)2210} \end{array}$$

$$\begin{array}{r} 1660\text{r}2 \\ 5 \overline{)8302} \end{array}$$

$$\begin{array}{r} 316 \text{ r } 5 \\ 24 \overline{)7589} \end{array}$$

$$\begin{array}{r} 283 \text{ r } 8 \\ 31 \overline{)8781} \end{array}$$

$$\begin{array}{r} 86 \text{ r } 21 \\ 38 \overline{)3289} \end{array}$$

$$\begin{array}{r} 87 \text{ r } 26 \\ 46 \overline{)4028} \end{array}$$

$$\begin{array}{r} 592 \text{ r } 10 \\ 16 \overline{)9482} \end{array}$$

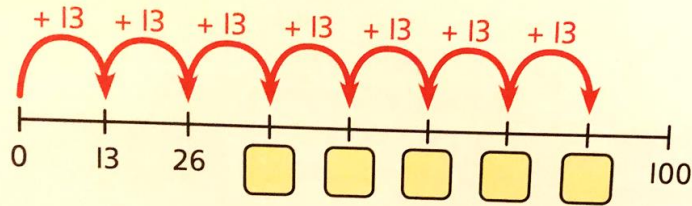
$$\begin{array}{r} 151 \text{ r } 36 \\ 56 \overline{)8492} \end{array}$$



How do you think you would solve a division sum where you are dividing by a three digit number??? Explain using maths.

DIVE DEEPER 1

- 1 There is a butterfly in North America that emerges every 13 years. How many times will the butterfly appear in 100 years?



$$\begin{array}{r} 13 \overline{) 100} \\ \underline{13} \\ 100 \end{array}$$

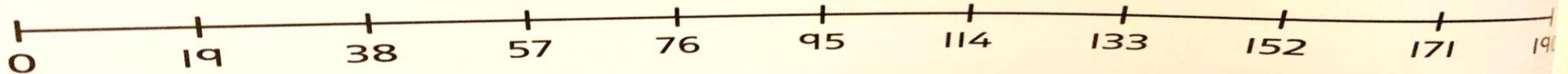
remainder

$$100 \div 13 = \text{remainder } \text{}$$

The butterfly will appear times in 100 years.

There will then be years left until 100 years have passed.

- 2 There is a lighthouse jellyfish that has lived to 306 years old. A hurricane occurs every 19 years in the ocean where it lives. How many hurricanes has this jellyfish experienced?



$$\begin{array}{r} 19 \overline{) 306} \\ \underline{190} \\ 116 \end{array}$$

$$\begin{array}{r} 19 \overline{) 306} \\ \underline{190} \\ 116 \end{array}$$

remainder

3

The following year, the race is split into 40 equal stages. Kate, Alex and Luis are working out how long each stage will be now.

I think each stage is 30 km remainder 35 km.



Kate

I think each stage is 30 km, with one final stage of 35 km.



Alex

I think each stage is 30 km and $\frac{35}{40}$ km.

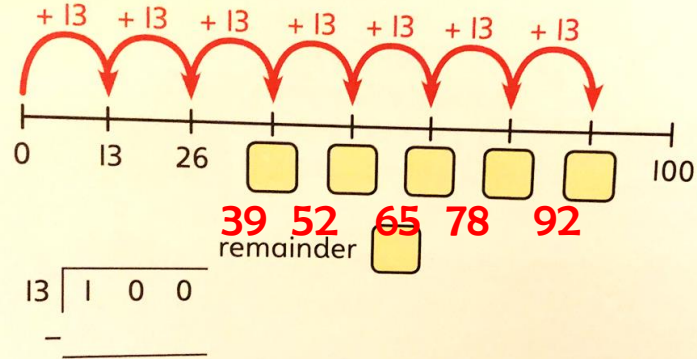


Luis

Who do you agree with? Why?

DIVE DEEPER 1

- 1 There is a butterfly in North America that emerges every 13 years. How many times will the butterfly appear in 100 years?



$$100 \div 13 = 7 \text{ remainder } 8$$

The butterfly will appear 7 times in 100 years.

There will then be 8 years left until 100 years have passed.

3

The following year, the race is split into 40 equal stages. Kate, Alex and Luis are working out how long each stage will be now.

I think each stage is 30 km remainder 35 km.



Kate

I think each stage is 30 km, with one final stage of 35 km.



Alex

I think each stage is 30 km and $\frac{35}{40}$ km.

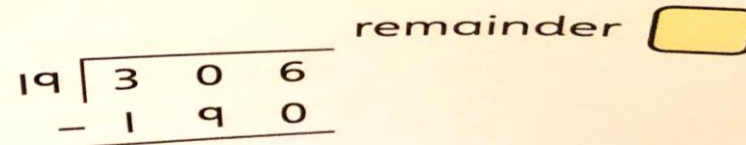
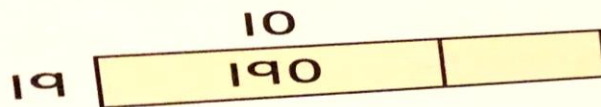
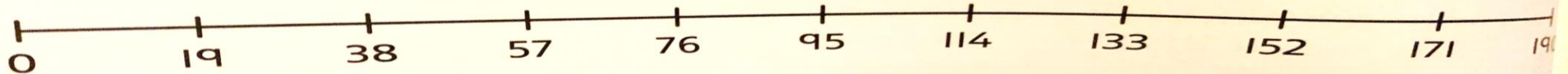


Luis

Who do you agree with? Why?

2

There is a lighthouse jellyfish that has lived to 306 years old. A hurricane occurs every 19 years in the ocean where it lives. How many hurricanes has this jellyfish experienced?



16r2

4

- a) A snake sheds its skin every 68 days. If the snake sheds its skin today, will it also shed its skin in exactly one year's time? If not, how many days later will it shed its skin?



I think there are 365 days in one year. I will divide 365 by 68.



I wonder how the answer will change if it is a leap year.



5

DIVE DEEPER 2



$$1,890 \div 45 = \square$$

$$1,311 \div 23 = \square$$

$$\square = 2,346 \div 23$$

$$7,379 \div 47 = \square$$

$$4,000 \div 80 = \square$$

$$\square = 2,525 \div 25$$

- b) Discuss what the remainder tells you in each of these problems.

- A carpenter takes 25 days to make one chair. How many chairs can she make in a year?
- A builder needs 365 planks to build a roof. The planks come in packs of 25. How many packs should he buy?
- A bricklayer lays 365 bricks in 10 hours. How many bricks does he lay per hour?

I am going to use long division for each one.



I do not think that is always the most efficient method. I think you can solve some of these much more quickly.

4

- a) A snake sheds its skin every 68 days. If the snake sheds its skin **today**, will it also shed its skin in exactly one year's time? If not, how many days later will it shed its skin?



I think there are 365 days in one year. I will divide 365 by 68.



I wonder how the answer will change if it is a leap year.



- b) Discuss what the remainder tells you in each of these problems.

- A carpenter takes 25 days to make one chair. How many chairs can she make in a year?
- A builder needs 365 planks to build a roof. The planks come in packs of 25. How many packs should he buy?
- A bricklayer lays 365 bricks in 10 hours. How many bricks does he lay per hour?

DIVE DEEPER 2



5

$$1,890 \div 45 = \boxed{42}$$

$$1,311 \div 23 = \boxed{57}$$

$$\boxed{102} = 2,346 \div 23$$

$$7,379 \div 47 = \boxed{157}$$

$$\boxed{101} = 2,525 \div 25$$

$$4,000 \div 80 = \boxed{50}$$

I am going to use long division for each one.



I do not think that is always the most efficient method. I think you can solve some of these much more quickly.