

28.1.21

LI: To apply my knowledge to solve reasoning problems

1.

Rosie writes,
 $85 \div 3 = 28 \text{ r } 1$

She says 85 must be 1 away from a multiple of 3
Do you agree?

37 sweets are shared between 4 friends.
How many sweets are left over?

Four children attempt to solve this problem.

- Alex says it's 1
- Mo says it's 9
- Eva says it's 9 r 1
- Jack says it's 8 r 5

Can you explain who is correct and the mistakes other people have made?

2.

Whitney is thinking of a 2-digit number that is less than 50

When it is divided by 2, there is no remainder.

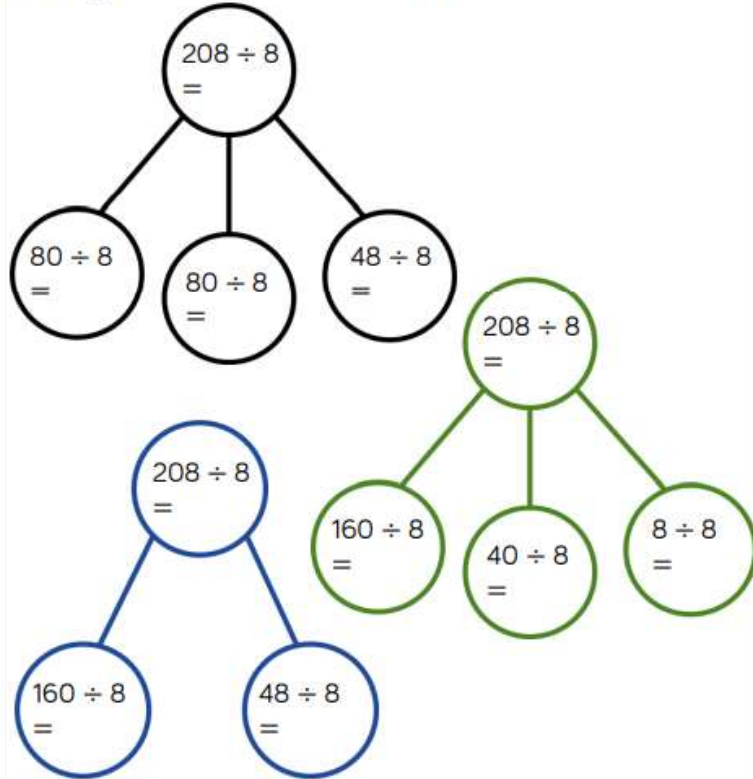
When it is divided by 3, there is a remainder of 1

When it is divided by 5, there is a remainder of 3

What number is Whitney thinking of?

3.

Dexter is calculating $208 \div 8$ using part-whole models.
Can you complete each model?

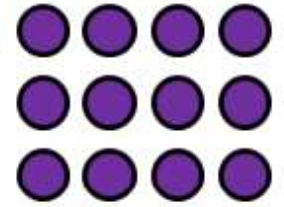


How many part-whole models can you make to calculate $132 \div 4$?

4.

You have 12 counters and the place value grid. You must use all 12 counters to complete the following.

Hundreds	Tens	Ones



- Create a 3-digit number divisible by 2
- Create a 3-digit number divisible by 3
- Create a 3-digit number divisible by 4
- Create a 3-digit number divisible by 5
- Can you find a 3-digit number divisible by 6, 7, 8 or 9?

5.

Here are the meal choices in the school canteen.

Starter	Main	Dessert
Soup Garlic Bread	Pasta Chicken Beef Salad	Cake Ice-cream Fruit Salad

There are 2 choices of starter, 4 choices of main and 3 choices of dessert.

How many meal combinations can you find? Can you use a systematic approach?

Can you represent the combinations in a multiplication?

If there were 20 meal combinations, how many starters, mains and desserts might there be?

6.

Alex has 6 T-shirts and 4 pairs of shorts.
Dexter has 12 T-shirts and 2 pairs of shorts.

Who has the most combinations of T-shirts and shorts?

Explain your answer.