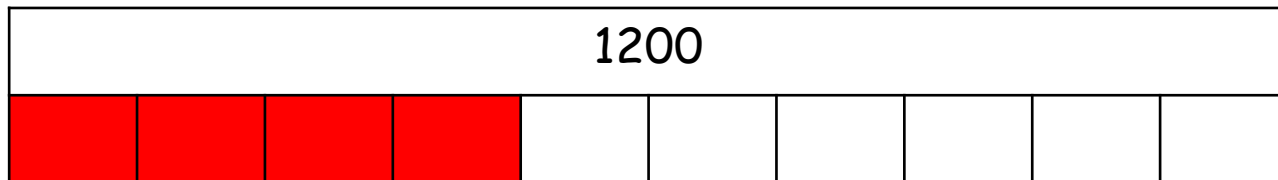
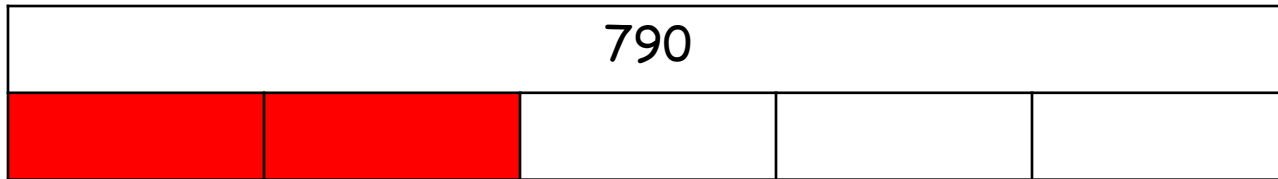
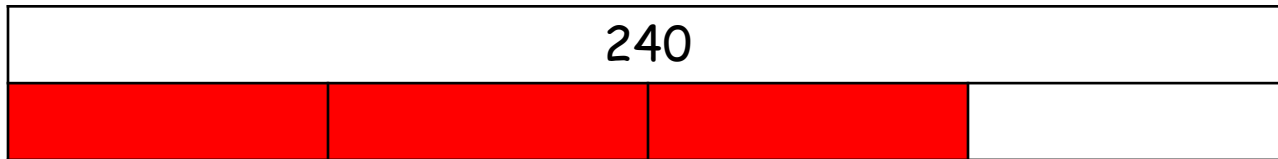


RECALL

How many different calculations can you write for each of these bar models?

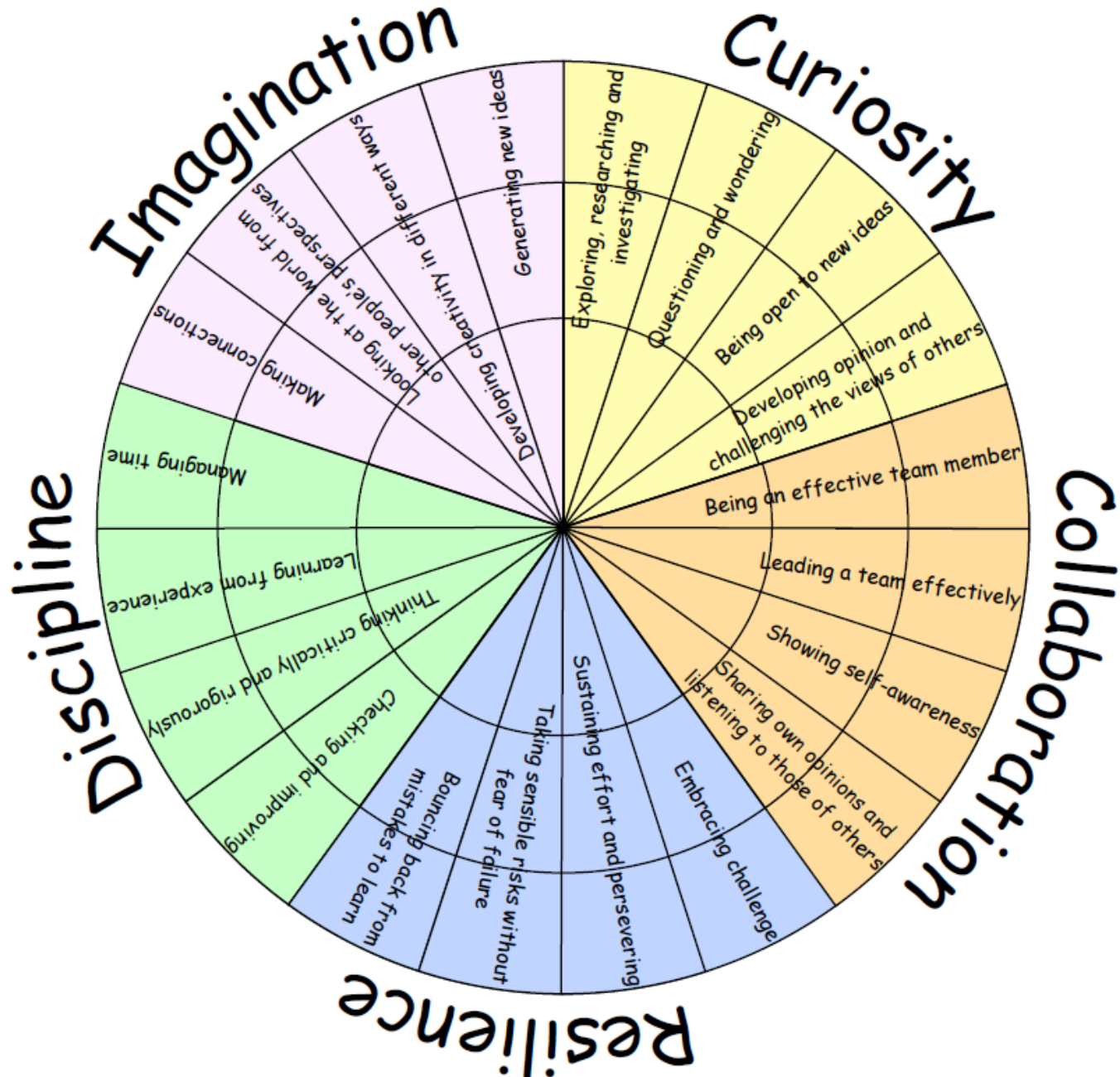


Can you make the calculation into a word problem. Think carefully about the context.

I CAN RECALL AND USE
EQUIVALENCE BETWEEN
FRACTIONS, DECIMALS AND %
TO SOLVE PROBLEMS

Percentage (15ii)

LEARNING HABITS?



GUIDED PRACTICE

- 1) What was the weight of the paper that class 1 recycle?
- 2) In weight, how much more paper than plastic did class 1 recycle?



INTELLIGENT PRACTICE



$$10\% \text{ of } 420 =$$

$$20\% \text{ of } 420 =$$

$$30\% \text{ of } 420 =$$

$$40\% \text{ of } 420 =$$

$$60\% \text{ of } 420 =$$



$$5\% \text{ of } 80 =$$

$$5\% \text{ of } 820 =$$

$$5\% \text{ of } 2400 =$$

$$5\% \text{ of } 4620 =$$



$$1\% \text{ of } 740 =$$

$$2\% \text{ of } 740 =$$

$$3\% \text{ of } 740 =$$

$$4\% \text{ of } 740 =$$

$$6\% \text{ of } 740 =$$



$$10\% \text{ of } \underline{\quad} = 52$$

$$20\% \text{ of } \underline{\quad} = 64$$

$$5\% \text{ of } \underline{\quad} = 95$$

DIVE DEEPER 1

1) Class 2 collected 120 kg of waste to recycle. 60% was paper and 40% was plastic.

Use a bar model to calculate the weight of paper and plastic that class 2 recycled.

2) Calculate these values.

5% of £300 =

15% of 300 cm =

55% of 300 kg =

95% of 30 km =

3) Toshi plants 240 tulip bulbs. 10% are red tulips and 5% are yellow. The rest are pink.

How many of each colour are there?

DIVE DEEPER 1 ANSWERS

1) Class 2 collected 120 kg of waste to recycle. 60% was paper and 40% was plastic.

$$\text{Paper} = 60\% \text{ of } 120 = 72 \text{ kg}$$

$$\text{Plastic} = 40\% \text{ of } 120 = 48 \text{ kg}$$

2) Calculate these values.

$$5\% \text{ of } \pounds 300 = \pounds 15$$

$$15\% \text{ of } 300 \text{ cm} = 45 \text{ cm}$$

$$55\% \text{ of } 300 \text{ kg} = 165 \text{ kg}$$

$$95\% \text{ of } 30 \text{ km} = 28.5 \text{ km}$$

3) Toshi plants 240 tulip bulbs. 10% are red tulips and 5% are yellow. The rest are pink.

How many of each colour are there?

$$\text{Red tulips} = 24$$

$$\text{Yellow tulips} = 12$$

$$\text{Pink tulips} = 204$$

DIVE DEEPER 2

4a) complete these percentages.

50% of 700

10% of 700

1% of 700

b) Using the answers above, find these percentages of 700.

11%

51%

21%

9%

49%

99%

5%

6%

5) 32,500 people signed up to run a marathon.

11% dropped out before the race day. 29% did not complete the course.

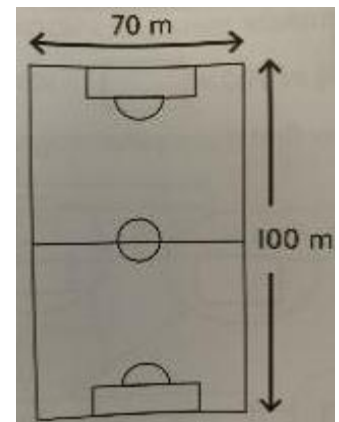
How many people finished the marathon?

6) On Monday, the groundskeeper mowed 30% of the football pitch.

On Tuesday, she mowed half of the remaining area.

On Wednesday, she mowed 1,250 square metres.

What area of the pitch was left to mow on Thursday?



DIVE DEEPER 2 ANSWERS

4a) complete these percentages.

$$50\% \text{ of } 700 = 350$$

$$10\% \text{ of } 700 = 70$$

$$1\% \text{ of } 700 = 7$$

b) Using the answers above, find these percentages of 700.

$$11\% = 77 \quad 51\% = 357 \quad 21\% = 147 \quad 9\% = 63 \quad 49\% = 343 \quad 99\% = 693 \quad 5\% = 35 \quad 6\% = 42$$

5) 32,500 people signed up to run a marathon.

11% dropped out before the race day. 29% did not complete the course.

How many people finished the marathon? **19,500**

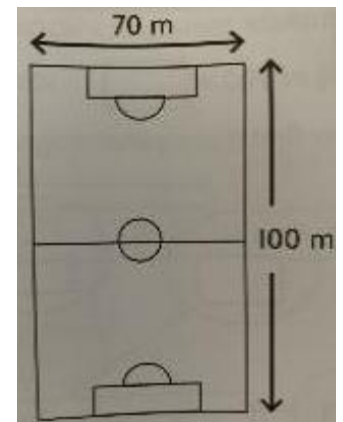
6) On Monday, the groundskeeper mowed 30% of the football pitch. **30% of 7000 = 2100 m²**

On Tuesday, she mowed half of the remaining area.

$$\mathbf{35\% \text{ of } 7000 = 2450 \text{ m}^2}$$

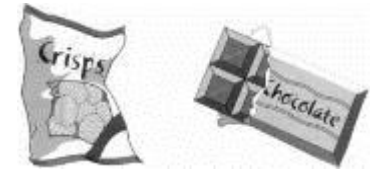
On Wednesday, she mowed 1,250 square metres.

What area of the pitch was left to mow on Thursday? **1200 m²**



DIVE DEEPER 3

7) In Class 6, **80%** of the children like crisps.
75% of the children **who like crisps** also like chocolate.
In Class 6, what percentage of the children like **both** crisps and chocolate?



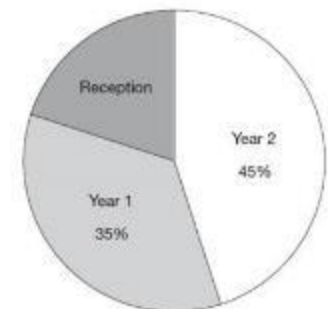
8a) In a survey of children's favourite fruit juices, these were the results.

Juice	Apple	Orange	Grape	Mango
Percentage of children	25%	14%	30%	31%

20 more children chose grape than chose apple.
How many children took part in the survey?

8b) Chen makes a pie chart to show the results.
What **angle** should he use for the children who chose **mango**?

9) The pie chart shows the Year groups of children at Woodland Infant School.
There are **56** children in **Year 1**.
How many children are there in Reception?



DIVE DEEPER 3 - ANSWERS

7) In Class 6, **80%** of the children like crisps.
75% of the children **who like crisps** also like chocolate.
In Class 6, what percentage of the children like **both** crisps and chocolate? **75% of 80% = 60%**



8a) In a survey of children's favourite fruit juices, these were the results.

Juice	Apple	Orange	Grape	Mango
Percentage of children	25%	14%	30%	31%

20 more children chose grape than chose apple.
How many children took part in the survey? **400**

8b) What **angle** should he use for the children who chose **mango**?
 $360^\circ \times 31\% = 111.6^\circ$

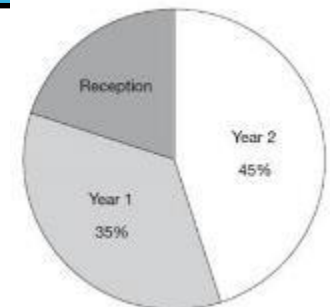
9) How many children are there in Reception?

$$56 = 35\%$$

$$8 = 5\%$$

$$160 = 100\%$$

$$\text{Reception} = 20\% \rightarrow 20\% \text{ of } 160 = 32$$



SELF-ASSESSMENT

- Some will even be able to think about most efficient methods to find percentages of amounts
 - Some will be able to find any percentage of an amount
 - Most will be able to find any multiple of 10 and 5% of an amount
 - All will be able to explain how to use 10% to find a multiple of 10%
- 