Year 1

EXAMPLES OF QUESTIONS AND REASONING AND PROBLEM SOLVING CHALLENGES

Add 1 digit within 10

a) Sam has 2 sweets.
Ann has 6 sweets.
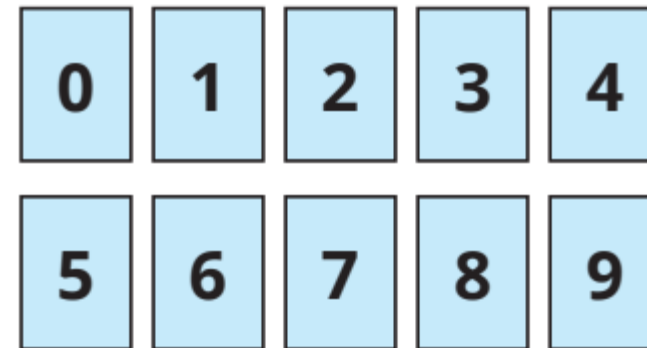How many sweets do they have altogether?

☐ + ☐ = ☐

b) Ron has 2 dogs and 3 cats.
How many pets does he have altogether?

☐ + ☐ = ☐

Here are some digit cards.

0	1	2	3	4
5	6	7	8	9

Use the cards to write a number sentence.

☐ + ☐ = ☐

Can you do it a different way?
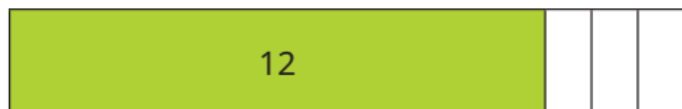
What do you notice?
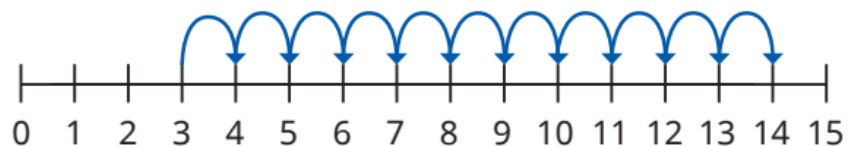
Add 1 and 2 digit numbers to 20

Sam has 12 sweets.

Max gives her 3 more sweets.

How many sweets does Sam have now?

| 12 | | | |

Sam has ☐ sweets now.

4 Each number line shows 3 + 11

What is the same and what is different?

Use the number lines to work out the additions.

a) 2 + 13 = ☐

Mo and Ron are counting on to work out 11 + 7

11, 12, 13, 14, 15, 16, 17

Mo

12, 13, 14, 15, 16, 17, 18

Ron

Who is correct?

Use a number line to show your answer.

Subtract 1 digit numbers within 10

3 There are 10 cars in a car park.

4 cars leave.

How many cars are left in the car park?

☐ − ☐ = ☐

4 Ann and Tom have 9 strawberries in total.

Ann eats 2 strawberries and Tom eats 1 strawberry.

How many strawberries do they have left?

☐

There are 7 bees on some flowers.

Some bees fly away.

How many ways can you complete the subtraction?

_____ = 7 − _____

Tell a story for each one.

Why can you not use 8 or 9?

Talk about it with a partner.

Subtract 1 and 2 digit numbers to 20

Dan has 15 stickers.

He gives 7 of his stickers to Kay.
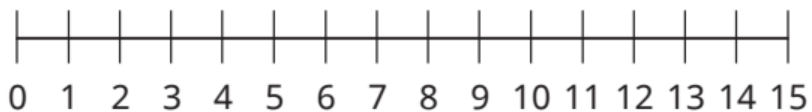
How many stickers does he have now?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

There are 13 toys in a box.
Ann takes some toys out of the box.
There are 5 toys left in the box.
How many toys does Ann take out of the box?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

There are 11 pink pens and 7 green pens in a pot.

How many more pink pens are there than green pens?

There are 18 more pink pens than green pens.
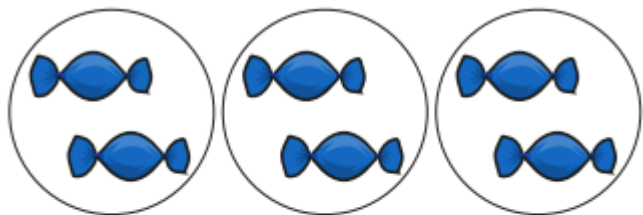
What mistake has Tiny made?

Draw a picture to show the correct answer.

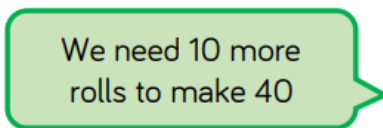# Multiplication (repeated addition)

Year 1

Year 2

How many sweets are there?

☐ + ☐ + ☐ = ☐

There are ☐ sweets.

Eva and Whitney are making equal groups of bread rolls.

Eva: We need one more group to make 40

We need 10 more rolls to make 40

Whitney

Who do you agree with? Explain why.

Complete the sentences.

a) 3 + 3 + 3 + 3 = 12

There are ☐ equal groups with ☐ in each group.

b) 2 + 2 + 2 + 2 + 2 + 2 + 2 = 14

There are ☐ equal groups with ☐ in each group.

Tiny is adding equal groups.

5 + 5 = 2 + 2 + 2 + 2 + 2

Do you agree with Tiny's addition?
Use cubes to help you explain.

Year 2

EXAMPLES OF QUESTIONS AND
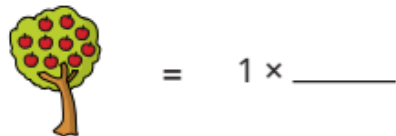REASONING AND PROBLEM
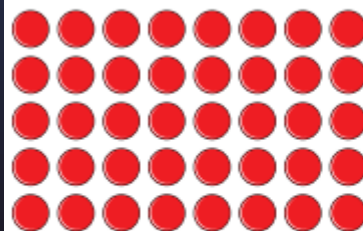SOLVING CHALLENGES

2s, 5s and 10s times tables

Complete the table.

Picture	Multiplication	Sentence
(4 coins)	4 × 10 = 40	4 lots of 10 is equal to 40
	35 = 7 × 5	
		6 lots of 3 is equal to 18

Write <, > or = to complete the statements.

(cherries) ◯ (grapes)

4 lots of 3 ◯ (birds)

(apple tree) = 1 × _____

Use the arrays to complete the number sentences.

(array of red dots)   (array of red dots)   (array of red dots)

_____ × 5 = _____   _____ × 5 = _____   _____ × 5 = _____

_____ ÷ 5 = _____   _____ ÷ 5 = _____   _____ ÷ 5 = _____

Division (**sharing** and grouping)

Year 1

Year 2

Ron needs to share 20 bananas between 5 boxes.
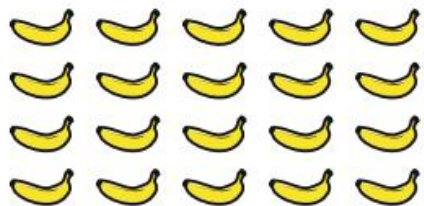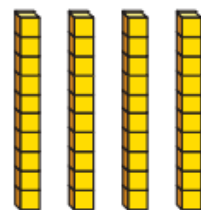

How many bananas will there be in each box?

20 bananas shared between 5 boxes is ☐

There will be ☐ bananas in each box.

Complete the divisions.
Use base 10 to help you.

a) 40 ÷ 2 = ☐

c) 40 ÷ 5 = ☐

b) 40 ÷ 4 = ☐

d) 40 ÷ 10 = ☐

Complete the divisions.

A 20 ÷ 5 = ☐

C 20 ÷ ☐ = 2

B 20 ÷ 4 = ☐

D 20 ÷ 2 = ☐

Write a letter in each box to match the divisions to the sentences.

Sam has 20 apples. She shares them equally between 4 boxes. ☐

Ron has 20 sweets. He shares them equally between some party bags. There are 2 sweets in each party bag. ☐
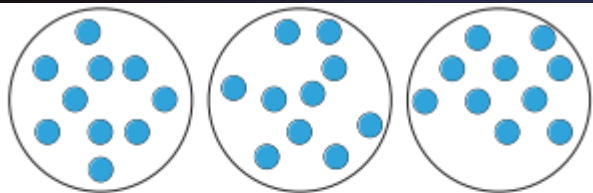
Max has 20 toy cars. He shares them equally between 5 boxes. ☐

Kim has 20 pens. She shares them equally with her sister. ☐

Division (sharing and <u>grouping</u>)

Year 1

Year 2

Add 1-digit and 2-digit numbers to 100

e) 2 + ☐ = 10   h) 75 + ☐ = 80

f) 47 + 3 = ☐   i) 6 + ☐ = 30

g) 1 + 69 = ☐   j) ☐ + 32 = 40

Tiny uses base 10 to make 46

I need to add 6 to get to the next 10

Is Tiny correct?

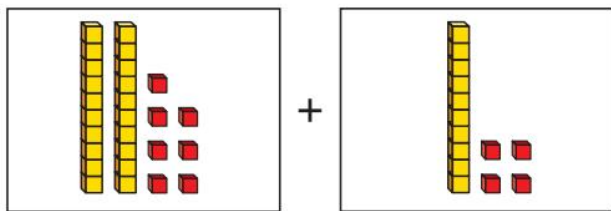How do you know?

Fill in the missing numbers.

24 + _____ = 30

25 + _____ = 30

26 + _____ = 30

27 + _____ = 30

What do you notice?

Add two 2-digit numbers to 100

The answer is 311

What mistake has Tiny made?

Talk about it with a partner.

Use base 10 to work out the additions.

a) 16 + 47 = ☐   46 + 17 = ☐

b) 36 + 57 = ☐   56 + 37 = ☐

c) 76 + 17 = ☐   16 + 77 = ☐

d) 27 + 56 = ☐   57 + 26 = ☐

What do you notice?

Why does this happen?

Kim is working out 28 + 19

I know I need to make an exchange.

How does Kim know this?

What is 28 + 19?

Subtract 1 and 2-digit numbers to 100

Jo uses base 10 to show some subtractions.

Work out the subtractions.

a)

$\square$

b)
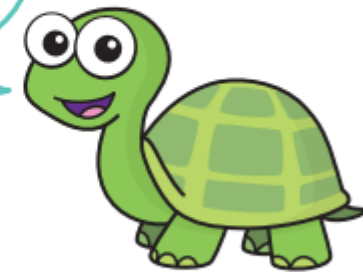
$\square$

c)

$\square$

Work out the missing parts.

a)

| 64 | |
| 18 | |

b)

| 94 |
| 37 | ← → |
| $\square$ |

c)

53
46
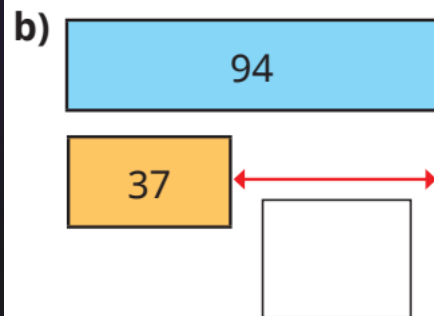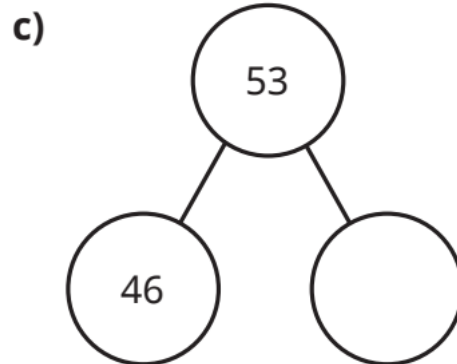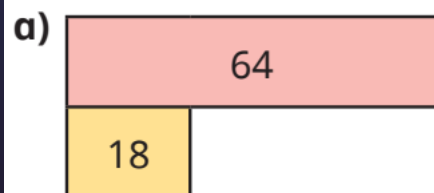
Tiny is working out 61 – 8

8 – 1 = 7
so 61 – 8 = 67

Is Tiny correct?

How do you know?