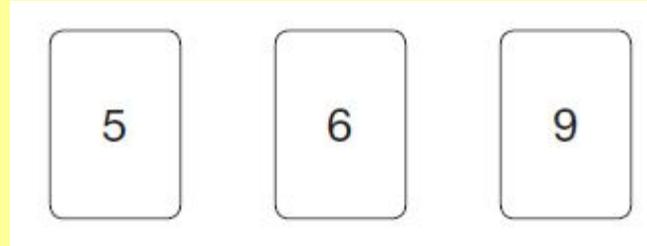


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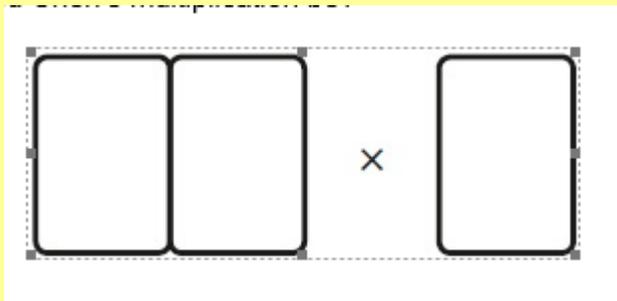
I can solve correspondence and
integer scaling problems.

Starter Question

Chen uses these digit cards.



- She makes a 2-digit number and a 1-digit number.
- She multiplies them together.
- Her answer is a **multiple of 10**
- What could Chen's multiplication be?



How can you begin to solve this problem?

You need to think about what number I could multiply by to get a number which is a multiple of 10.

For example I know that my answer will have to end in a 0 to be a multiple of 10.

Which number could that be? Use your times tables knowledge.

Today we are going to look at different types of word problems.

There are two main types of problems that we will look at:

Correspondence Problems - finding all solutions and notice how to use multiplication facts to solve problems.

Integer Scale Problems – when a question gives you an amount and you multiply to make that amount bigger.

Correspondence Problems

An ice-cream van has 4 flavours of ice-cream and 2 choices of toppings.

Ice-cream flavour	Toppings
Vanilla	Sauce
Chocolate	Flake
Strawberry	
Banana	

How many different combinations of ice-cream and toppings can be made?

Complete the multiplication to represent the combinations.

___ × ___ = ___ There are ___ combinations.

Can you use a table to support you to find all the combinations?

Can you use a code to help you find the combinations? e.g. VS meaning Vanilla and Sauce

See if you can have a go and then work out a multiplication for this.

When I solve a question like this there are many ways I could start. I could begin by writing all the possibilities for example:

Vanilla – Sauce Chocolate – Sauce etc.

Vanilla – Flake

At holiday club, there are 2 different morning activities, 3 different afternoon activities and 3 different evening activities.



The children each choose one morning, one afternoon and one evening activity.



Morning	Afternoon	Evening
Painting	Football	Reading
Gardening	Swimming	Movie
	Bowling	Board games



- a) Write a multiplication calculation to represent the combinations.

$$\square \times \square \times \square \times \square = \square$$

- b) If there were 12 different combinations of activities, how many morning, afternoon and evening activities could there be?

See if you can have a go at this one.

Start in the same way with writing down all the possibilities.

Here are the meal choices in the school canteen.

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

Last correspondence question.

This is a little bit harder so make sure you read each of the parts carefully.

Integer Scale Problems

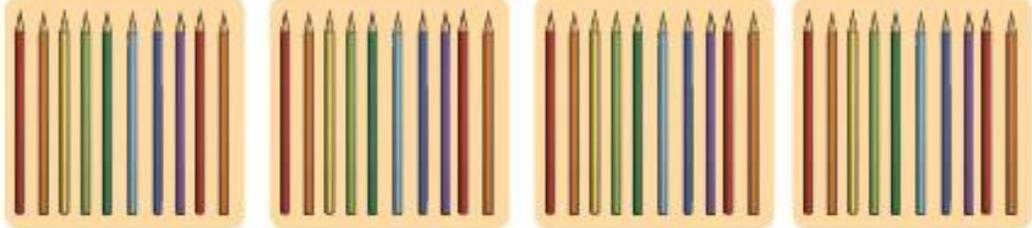
Here is what is meant by the amount is getting bigger by using adding or multiplication.

Integer Scaling Problems

10 pencils



$10 \times 4 = 40$ pencils



75g



$75g \times 2 = 150g$

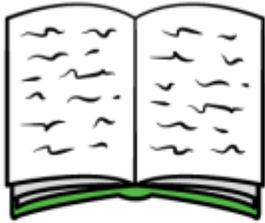


1. A shop sells packs of sweets.
Each pack has one red sweet and two green sweets.
Sam buys some packs so he has 4 red sweets.
How many green sweets does he have?

You may want to draw this question to help you with solving it.

Can you write your working out as well.

2. Teddy and his mum were having a reading competition.
In one month, Teddy read 814 pages.

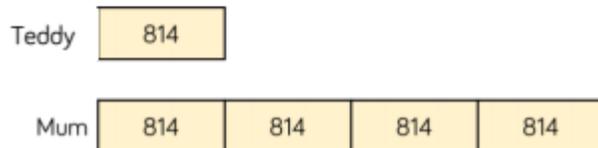


His mum read 4 times as many pages as Teddy.

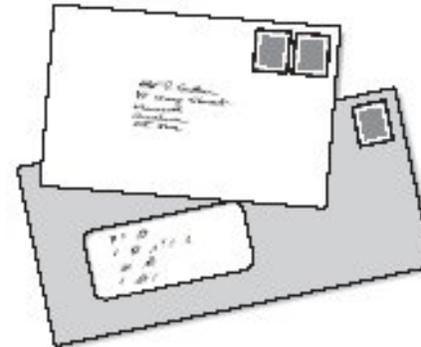
How many pages did they read altogether?

How many fewer pages did Teddy read?

Use the bar model to help.



3. Two letters have a total weight of **120 grams**.



One letter weighs **twice as much** as the other.

Write the weight of the **heavier** letter.