

**Using trial and improvement (or bar modelling) to solve problems in context**

**Actual Past Paper Questions**

**Nov 16 Foundation/Intermediate Unit 1**

A shop has 31 plant pots.  
Some are blue, some are yellow and the rest are red.  
There are five more blue pots than yellow pots.  
There are four times as many blue pots as there are red pots.

Calculate how many pots there are of each colour. [3]

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Blue ..... Yellow ..... Red .....


**Solving using Trial & Improvement**

[tinyurl.com/PSTRImp](https://tinyurl.com/PSTRImp)



**Solving using Bar Modelling**

[tinyurl.com/PSBarMod](https://tinyurl.com/PSBarMod)



**Nov 17 Foundation/Intermediate Unit 1**

Team A and Team B play in a competition.  
Team A has nine more points than Team B.  
Team A has four times as many points as Team B.

How many points does each team have? [2]

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Team A: ..... points      Team B: ..... points

### Practice Questions

1. An aquarium contains 80 tropical fish.  
Some are Tetra, some are Rainbow and the rest are Angel fish.  
There are three times more Angel than Tetra fish.  
There are ten fewer Angel fish than Rainbow fish.

Calculate how many fish there are of each type.

2. One day a café sells 106 sandwiches.  
Some are bacon, some are cheese, some are ham and the rest are tuna.  
Five times as many bacon are sold than tuna.  
They sell half as many cheese as bacon.  
They sell 18 more ham than cheese.

Calculate how many sandwiches of each type were sold.

3. A garage has 120 cars in stock.  
Some are Audi, some are Lexus, some are Volvo and the rest are BMW.  
They have the same number of Lexus cars as Volvo cars.  
One third of the stock are Audi's  
There are half as many BMW's in stock than Audi's.

Calculate how many of each car are in stock.

4. Susan's purse contains 33 coins.  
Some are £2 coins, some are £1 coins, some are 50p coins and the rest are 10p coins.  
She has three times as many £1 coins than £2 coins.  
There are five more 50p coins than £1 coins.  
There are half as many 10p coins than 50p coins.

Calculate how many of each coin Susan has and the total value of the money in her purse.

5. A computer shop sells laptop computers, desktop computers and tablets.  
They presently have 71 items in stock.  
One quarter of the number of tablets are desktops.  
There are ten more tablets than laptops.

Calculate how many devices the shop has in stock.

6. In an innings a cricket team record 33 boundary scores (4's or 6's)  
They score ten times as many 4's as 6's.  
Two thirds of the TOTAL score comes from singles (not boundaries)

Calculate the total score made by the team in the innings.