

Teacher Notes

Introduction

Pupils can work on this problem individually or with others.

- They can discuss how they will use the information on cost and earnings to work out whether Peter can afford the mobile phone.
- They can discuss the differences between the weekly or monthly earnings.
- They can compare their approach and adapt their own strategy if needed.

This problem deals with a pupil's ability to read through information, obtain total amounts of money received and calculate monthly earnings in order to make a financial decision on buying a mobile phone.

What I know (think)

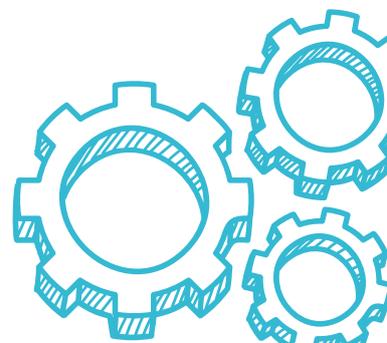
The pupils should know from the given problem:

- Peter wants a mobile phone and needs £40 to buy his brother's old phone.
- It will also cost him £8 for a SIM-only deal.
- Relatives have given Peter money for his birthday.
- Peter earns £8 every month from his grandmother.
- He also earns £3 every week from his parents.
- He has signed up to an online game membership at £4 per month for the next 12 months.

What I need to know (identify)

Pupils need to identify:

- how much money Peter has received in total for his birthday;
- whether Peter's birthday money is enough to pay his brother the £40;
- how much Peter earns each month from both his grandmother and his parents;
- how much money he has left each month after he pays for his online game subscription that he has already signed up for; and
- whether he can afford to buy the phone and pay the SIM-only deal each month.



Buying a Mobile Phone (Continued)

What I need to do (employ)

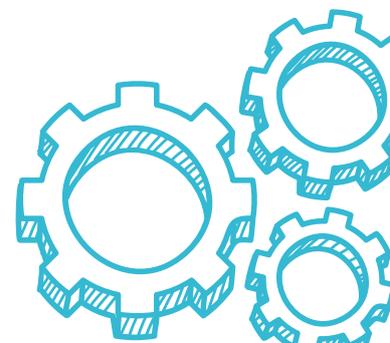
Pupils should use the information they have been given and come up with appropriate steps to help them solve the problem, for example:

- They recognise that they must total up all the money Peter has received from various relatives to see if he can afford the initial one-off payment of £40 ($£15 + £10 + £5 + £7 = £37$).
- They need to calculate the shortfall to see if he has a means of paying this from his monthly earnings. ($£40 - £37 = £3$)
- They need to work out his monthly earnings.
- They can either multiply Peter's weekly income of £3 (from his parents) by 4 or use repeated addition. They must add on the monthly earnings of £8 that his grandmother also gives him ($£12 + £8 = £20$).
- They need to subtract his monthly online game subscription that he has already signed up for from these monthly earnings ($£20 - £4 = £16$).
- They deduce that this is enough for him to pay £8 per month for the SIM-only deal, with £8 left over.
- They also recognise that this also allows him to pay the shortfall of £3 for the phone itself to his brother in the first month. This would leave Peter with £5 left over for this month.

What I did (review)

Pupils will use self-assessment, peer assessment or teacher feedback to decide whether they have approached the problem as intended.

- Did they correctly add up the money Peter received for his birthday?
- Did they correctly identify the fact that there was a shortfall if he wants to pay his brother in full for the phone?
- Did they multiply the weekly earnings by 4 to get the monthly earnings from his parents?
- Did they add this to the monthly earnings from his grandmother?
- Did they deduct the monthly expense of the online game subscription?
- Did they correctly deduce that there was enough left over to pay the monthly SIM-only deal each month?
- Did they use any remaining money from the first month to add to Peter's birthday money so that he could afford the phone?



Buying a Mobile Phone (Continued)

Curriculum Objectives

This problem should enable pupils to demonstrate their knowledge, understanding and skills through:

Developing pupils as Contributors to the Economy and the Environment

Apply mathematical skills in everyday financial planning and decision making:

- Pupils will show how they can calculate total earnings to enable them to make a personal financial decision.

Thinking Skills and Personal Capabilities

This problem can provide an opportunity for pupils to demonstrate a variety of the following Thinking Skills and Personal Capabilities:

Managing Information

- Plan and set goals and break a task into sub-tasks

Thinking, Problem-Solving and Decision Making

- Examine options and weigh up pros and cons
- Generate possible solutions, try out alternative approaches and evaluate outcomes

Being Creative

- Experiment with ideas and questions
- Learn from and value other people's ideas

Working with Others

- Listen actively and share opinions
- Suggest ways of improving their approach to working collaboratively

Self-Management

- Seek advice when necessary
- Organise and plan how to go about a task

Cross-Curricular Skills

This problem should enable pupils to demonstrate a variety of the following Cross-Curriculum Skills:



Using Mathematics

