

Nguzu Nguzu Mathematics

Pupil's Resource Book 1



Standard 6

First Edition 2005

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Solomon Islands



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Nguzu Nguzu Mathematics

Standard 6

**Pupil's
Resource
Book 1**

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Important Note

This Pupil's Resource Book belongs to the school. You must not take it home unless your teacher tells you to and it must always be returned to school.

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1b

Adding and Subtracting 5 and 6-Digit Numbers

Activity A

Copy and complete the sums in your exercise book.

$$\begin{array}{r} 1. \quad 124,351 \\ + 60,620 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 119,000 \\ + 120,000 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 161,342 \\ + 33,333 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 256,455 \\ - 55,235 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 722,108 \\ - 12,007 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 484,236 \\ - 303,121 \\ \hline \end{array}$$

Activity B

Copy and complete the sums in your exercise book.

$$\begin{array}{r} 1. \quad 365,120 \\ + 139,846 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 120,671 \\ + 232,666 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 156,399 \\ + 82,722 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 39,600 \\ + 34,766 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 22,430 \\ + 12,970 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 36,432 \\ - 17,000 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 34,221 \\ - 12,509 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 123,456 \\ - 12,654 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 81,302 \\ - 42,240 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 213,432 \\ - 112,614 \\ \hline \end{array}$$

Activity C

Copy and solve these problems in your exercise book.

1. Guadalcanal Province received 75,651 cartons of books from the British High Commissioner and 135,499 cartons of stationery from the New Zealand Government. How many cartons did the province receive altogether?
2. A farmer has 180,610 cows. If he sells 76,000, how many does he have left?
3. The population of Honiara is 394,221. This includes 188,260 children under 18 years of age and 111,029 adult men.
 - a. How many adult women are there?
 - b. How many adults are there in total?
 - c. How many more adults are there than children living in Honiara?

Remember!

Show your working out as well as your answer in your exercise book.



2a Revising Rounding Off and Estimation

Activity A

Copy and complete this table by rounding off each number. The first one has been done for you.

		nearest 10	nearest 100	nearest 1,000
1.	1,342	1,340	1,300	1,000
2.	4,659			
3.	5,207			
4.	3,799			
5.	12,530			
6.	24,748			
7.	124,555			
8.	139,008			

Remember!

When rounding numbers look at the digit to the right of the place you are rounding to. If the digit is 5 or above, round up. If it is below 5, round down.

Activity B

First, round the numbers to the nearest thousand to work out an estimate. Then, do the actual calculation. Finally, compare your estimate with your calculated answer.

Write your estimate and your calculation in your exercise book. The first one has been done for you to show you how to set it out.

1. $56,709 + 25,398$ → Estimate = $57,000 + 25,000 = 82,000$

Calculated answer →

$$\begin{array}{r}
 56,709 \\
 + 25,398 \\
 \hline
 82,107 \\
 111
 \end{array}$$

Compare $82,107 - 82,000 = 107$

2. $66,600 + 23,506$

3. $90,023 + 500,600$

4. $73,795 + 18,102$

5. $130,000 + 78,046$

Remember!

Estimate
Calculate
Compare

Activity C

Here are some addition sums. For each one, first work out an estimate, call this answer a. Then calculate an actual answer call this answer b. Take care to set the sums out correctly in your exercise book.

Whole Number Calculations

1. $12,345 + 9,775 =$
2. $993 + 11,456 =$
3. $25,913 + 6,186 =$
4. $13,673 + 213,768 + 597 =$
5. $272,423 + 321,809 + 67,099 =$
6. $678 + 341 + 524,009 + 309,687 =$

Remember

Use a comma to separate the thousands from the rest on the number.



2b

Estimating and Subtracting

Activity A

Round the numbers to the nearest thousand, make an estimate of what you expect the answer will be close to. After doing your calculation compare your estimated answer and the calculated answer.

- | | | | |
|--|--|--|--|
| 1. $\begin{array}{r} 14,800 \\ - 14,700 \\ \hline \end{array}$ | 2. $\begin{array}{r} 93,578 \\ - 48,132 \\ \hline \end{array}$ | 3. $\begin{array}{r} 45,827 \\ - 18,697 \\ \hline \end{array}$ | 4. $\begin{array}{r} 309,033 \\ - 112,026 \\ \hline \end{array}$ |
| 5. $\begin{array}{r} 176,931 \\ - 158,415 \\ \hline \end{array}$ | 6. $\begin{array}{r} 400,006 \\ - 321,677 \\ \hline \end{array}$ | 7. $\begin{array}{r} 50,000 \\ - 42,306 \\ \hline \end{array}$ | 8. $\begin{array}{r} 558,200 \\ - 200,709 \\ \hline \end{array}$ |

9. $43,201 - 19,879 =$

10. $654,395 - 98,456 =$

Activity B

Answer the following questions. Make sure you estimate your answer first. Set your sums out carefully in your exercise book and show all your working out.

1. If there are 345 boys and 491 girls in a secondary school how many more girls than boys are there?
2. If we raise \$248 at the school fundraising how much more do we need to raise to make \$500?
3. My primary school has 126 more pupils than the school in the next village. If my school has 567 pupils altogether how many pupils are there at the other school?
4. What is the difference between 99,000 and 999,000?
5. Take 25,650 away from 450,000.
6. How many do you have to add to 123,555 to get 231,450?
7. 537,899 minus 234,988.

Unit 1

8. Subtract 67,854 from 342,441.

Activity C

1. Look at the data below showing 2004 population estimates for various Pacific countries. Answer the questions using the data. Estimate your answers first.

Oceania 2004 Population Statistics (estimates)			
American Samoa	61,000	Northern Marianas	78,800
Australia	20,275,700	Palau	20,800
Cook Islands	18,600	Papua New Guinea	5,261,200
Fiji	846,700	Pitcairn Island	47
French Polynesia	256,800	Samoa	180,900
Guam	164,500	Niue	1,700
Kiribati	90,300	Norfolk Island	1,600
Marshall Islands	54,600	Solomon Islands	460,100
Micronesia	115,400	Tokelau	1,400
Nauru	1,700	Tuvalu	9,800
New Caledonia	226,800	Vanuatu	213,900
New Zealand	4,059,900	Wallis & Futuna	15,300

- Which country has the largest population?
 - What is the difference between the country with the largest population and the country with the smallest?
 - Look at the population for Solomon Islands. Compare it to Vanuatu and Fiji. Work out the population difference in each case.
 - How many more people live in Kiribati than in the Cook Islands?
 - How many more people live in Australia than New Zealand?
 - Find the population difference between New Caledonia and French Polynesia.
 - What is the population difference between American Samoa and Samoa?
 - All the figures in the table except one have been rounded to the nearest 100. Which country has not been rounded to 100? Why do you think this is?
2. Look at the table on the following page which shows the census figures for each province in Solomon Islands for 1970, 1976, 1986 and 1999. Answer the following questions by using this data.
- Work out the increase in the population of Solomon Islands between 1970 and 1976.
 - Calculate the population increase between 1976 and 1999.
 - Estimate which province has increased the most between 1970 and 1999.
 - Work out by how many the province you have named in answer c. has increased.
 - What was the population difference between Honiara and Malaita Province in 1999?

Whole Number Calculations

- f. By how much did the population of Western Province increase from 1970 to 1999?
- g. How many more people were there in Isabel Province than in Rennell-Bellona Province in 1970?
- h. Look back to the population figures given in question 1. By how many people has the whole population of Solomon Islands increased between the census of 1999 and the estimated number for 2004?

Province	1970	1976	1986	1999
Choiseul	8,017	10,349	13,569	20,008
Western	24,214	29,980	41,681	62,739
Isabel	8,653	10,420	14,616	20,421
Central	9,418	11,683	16,655	21,577
Rennell-Bellona	1,504	1,893	1,802	2,377
Guadalcanal	23,996	31,677	49,831	60,275
Malaita	51,722	60,043	80,032	122,620
Makira-Ulawa	12,390	14,891	21,796	31,006
Temotu	9,078	10,945	14,781	18,912
Honiara Town Council	12,006	14,942	30,413	49,107
Total	160,998	196,823	285,176	409,042

Now make up some questions of your own about the population tables above and swap them with a partner. Check each other's answers.

3a

Multiplication by 2 and 3-Digit Numbers

Activity A

Copy and complete the sums in your exercise book.

- | | | | | | |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 1. 320
x 10 | 2. 220
x 25 | 3. 510
x 50 | 4. 111
x 15 | 5. 201
x 20 | 6. 125
x 22 |
|----------------|----------------|----------------|----------------|----------------|----------------|

Activity B

Copy and complete the sums in your exercise book.

- | | | | | | |
|----------------|----------------|----------------|-----------------|-----------------|-----------------|
| 1. 537
x 48 | 2. 249
x 64 | 3. 347
x 35 | 4. 391
x 24 | 5. 673
x 23 | 6. 639
x 83 |
| 7. 476
x 76 | 8. 596
x 56 | 9. 199
x 41 | 10. 565
x 77 | 11. 372
x 46 | 12. 468
x 35 |

Unit 1

Activity C

Copy and complete each sum in your exercise book by finding the missing numbers.

$$\begin{array}{r} 1. \quad \begin{array}{r} 123 \\ \times 27 \\ \hline ab1 \\ 24c0 \\ \hline 3321 \end{array} \end{array}$$

$$\begin{array}{r} 2. \quad \begin{array}{r} 237 \\ \times 32 \\ \hline abc \\ 71d0 \\ \hline 7584 \end{array} \end{array}$$

$$\begin{array}{r} 3. \quad \begin{array}{r} 354 \\ \times 43 \\ \hline 1062 \\ 14a60 \\ \hline 15222 \end{array} \end{array}$$

Remember!

Show all your working out.



Set out and complete the following calculations. Show all your working out in your exercise book.

4. Multiply three hundred and seventy-four by thirty-five.
5. Multiply eight hundred and twenty-eight by sixty-six.
6. Multiply nine hundred and nine by nineteen.
7. Multiply six hundred and three by thirty-three.
8. Multiply eight hundred and eighty-eight by eighteen.

3b

Multiplying 4-Digit Numbers

Activity A

Copy and complete the sums in your exercise book.

$$1. \quad \begin{array}{r} 2,865 \\ \times 72 \\ \hline \end{array}$$

$$2. \quad \begin{array}{r} 1,920 \\ \times 36 \\ \hline \end{array}$$

$$3. \quad \begin{array}{r} 4,561 \\ \times 51 \\ \hline \end{array}$$

$$4. \quad \begin{array}{r} 3,214 \\ \times 22 \\ \hline \end{array}$$

$$5. \quad \begin{array}{r} 3,361 \\ \times 25 \\ \hline \end{array}$$

$$6. \quad \begin{array}{r} 5,642 \\ \times 32 \\ \hline \end{array}$$

$$7. \quad \begin{array}{r} 7,810 \\ \times 18 \\ \hline \end{array}$$

$$8. \quad \begin{array}{r} 4,670 \\ \times 16 \\ \hline \end{array}$$

Reminder!

When multiplying by the tens column always put a zero in the ones column of your answer.



Activity B

Set out these sums carefully in your exercise book and complete them. Show all your working out.

1. Multiply two thousand three hundred and thirty-two by fifty-five.
2. What is twenty-four times one thousand and sixty-eight?
3. What is the product of six thousand and eighteen and twenty-seven?

Activity C

Problem Solving

1. Table tennis balls are sold in packets of 36. How many balls are there in 2,224 packets?
2. The soccer stadium in Honiara can accommodate 4,950 spectators. If 12 more stadiums of the same size were built around the provinces, how many spectators could be accommodated all together? (Include the Honiara stadium in your calculation.)
3. A trade store ordered 1,235 cartons of biscuits. Each one contained 24 packets and cost \$42.
 - a. How many packets of biscuit did they order?
 - b. How much did the order cost?

3c

Problem Solving with Multiplication

Activity A

Copy the following sums and complete them in your exercise book.

- | | | | | | | | |
|----|---|----|---|----|---|----|---|
| 1. | $\begin{array}{r} 3,764 \\ \times 62 \\ \hline \end{array}$ | 2. | $\begin{array}{r} 2,314 \\ \times 19 \\ \hline \end{array}$ | 3. | $\begin{array}{r} 2,104 \\ \times 24 \\ \hline \end{array}$ | 4. | $\begin{array}{r} 7,680 \\ \times 30 \\ \hline \end{array}$ |
|----|---|----|---|----|---|----|---|

5. If one gallon of fuel costs \$27 how much will 180 gallons cost?
6. If all 1,453 workers at Solomon Taiyo are paid a \$25 Christmas bonus, how much will this amount to?

Activity B

A large clothing factory in Honiara makes T-shirts, shorts, skirts and school uniforms. Read each problem carefully. Write the sums in your exercise book and calculate the answers.

1. 1,223 pairs of shorts are made every week. How many pairs will be made in 12 weeks?
2. T-Shirts are packed in boxes of 36. How many are there in 1,200 boxes?
3. In December and January the factory makes extra school uniforms. They make 120 pairs of shorts, 120 skirts and 240 school shirts every day for 28 days. How many items of uniform do they make altogether?
4. If a complete uniform costs \$65, how much would it cost to buy uniforms for all 360 children in Patutiva School?

Unit 1

Activity C

The table shows some information about Solomon Soap Factory. Use the information in the table to solve the problems below. Show your working in your exercise book.

Product	Number produced each week	Packing	Price per case
Niu Soap	4,360	36 per case	\$216
Niu Washing Powder	1,580	48 per case	\$624
Washing Liquid	3,790	24 per case	\$360

1. How many bars of Niu Soap can the factory produce in 12 weeks?
2. How many boxes of Niu washing powder would there be in 1,204 cases?
3. What is the cost of 25 cases of washing liquid?
4. What is the total cost of 15 cases of Niu soap and 15 cases of Niu washing powder?
5. The factory operates for 45 weeks every year. How many of each product do they make in a year?

4a Division Revision

Activity A

Copy and complete these division questions in your exercise book.

1. $3 \overline{)3480}$ 2. $4 \overline{)3416}$ 3. $5 \overline{)4325}$ 4. $6 \overline{)3228}$

5. $7 \overline{)3976}$ 6. $8 \overline{)7616}$ 7. $9 \overline{)5625}$ 8. $7 \overline{)5439}$

9. $4 \overline{)2700}$ 10. $5 \overline{)4780}$ 11. $2 \overline{)5752}$ 12. $6 \overline{)4392}$



Activity B

All of these problems involve division. Think about how to solve the problem first then set out the calculation in your exercise book. Show all your working.

1. Divide \$377 between 4 pupils. How much does each one get? Is there any money left over?

Tip!

Knowing your multiplication facts will help you with division problems!

2. If 256 L of petrol is divided between 8 cans, how many litres will be in each can?
3. Six friends collected shells from the beach. If they collected 150 shells altogether how many did each one collect?
4. The plantation produces 8,375 bags of copra each month. If there are five workers on the plantation, how many bags does each worker produce?
5. At the end of a fishing trip, nine fishermen share their catch. If they have caught 297 fish, how many will each fisherman receive?
6. If I plant 112 cabbage seedlings in seven rows how many seedlings will there be in each row?

Activity C

1. Half of the 2,792 students at the technical college are boys. How many girl students are there?
2. The distance all the way around the world is about 25,000 km. How far is one quarter of the way round?
3. James earns \$375 for working from Monday to Friday. How much does he earn each day?
4. Melinda raised \$315 from selling watermelons. If she sold 9 altogether, how much did she charge for each watermelon?
5. Standard 6 Blue has 43 pupils and Standard 6 Red has 52 pupils. If both classes joined together for a sports day and split into 5 teams, how many pupils would be in each team?

4b

Dividing by a 2-Digit Divisor

Activity A

Find the answers to these division sums. Set the sums out carefully in your exercise book.

- | | | | |
|--------------------|---------------------|--------------------|--------------------|
| 1. $108 \div 12 =$ | 2. $132 \div 11 =$ | 3. $52 \div 13 =$ | 4. $84 \div 14 =$ |
| 5. $112 \div 14 =$ | 6. $121 \div 11 =$ | 7. $98 \div 14 =$ | 8. $130 \div 13 =$ |
| 9. $117 \div 13 =$ | 10. $144 \div 12 =$ | 11. $91 \div 13 =$ | 12. $65 \div 13 =$ |

Unit 1

Activity B

Copy these division sums and complete them in your exercise book.

1. $12 \overline{)744}$ 2. $11 \overline{)495}$ 3. $12 \overline{)492}$ 4. $13 \overline{)689}$
5. $14 \overline{)868}$ 6. $11 \overline{)671}$ 7. $13 \overline{)793}$ 8. $10 \overline{)500}$

Activity C

Solve these division problems in your exercise book.

1. Divide five hundred and eighty-eight by fourteen.
2. What is the quotient of six hundred and eighty-nine divided by thirteen?
3. If 792 mats were made by 11 women, how many mats did each woman make?
4. 684 bags of food were divided between 12 families after a feast. How many bags did each family get?
5. The poultry farm packed 300 eggs into boxes of 12. How many boxes did they use?
6. The ship carried 902 people from Honiara to Tulagi. It made a total of 11 crossings and was full up each time. How many people can the ship carry?

4c

Dividing Larger Numbers

Activity A

Copy these division questions into your exercise book carefully and complete them.

1. $10 \overline{)5730}$ 2. $11 \overline{)8415}$ 3. $10 \overline{)8360}$ 4. $11 \overline{)5412}$
5. $12 \overline{)9576}$ 6. $11 \overline{)8041}$ 7. $12 \overline{)7992}$ 8. $13 \overline{)5590}$

Activity B

Solve these division problems in your exercise book.

1. What is 2,584 divided by 17?
2. If 7,440 is shared between 16, what is the quotient?
3. How many is nine thousand four hundred and eighty divided by fifteen?
4. Calculate $9,880 \div 19$.

Remember!

The **dividend** is the number to be divided, the **divisor** is the number you divide by and the quotient is the answer



5. Divide 5,432 by 28.
6. How many times does 16 go into 5,392?
7. Share 5,940 between 20.
8. What is 4,278 divided by 23?

Activity C

1. If one spade costs \$14, how many spades could you buy for \$1,750?
2. If one wheelbarrow costs \$36, how many wheelbarrows could you buy for \$5,616?
3. The total cost for accommodation for 16 teachers at a workshop was \$5,760. How much was the cost per teacher?
4. A team of 15 players attended a netball tournament. The total cost of their travel was \$4,920. What was the cost for each player?
5. Mr. Rigeo won \$2,500 in a competition. He decided to share his prize between his children and their cousins. He had four children and sixteen nieces and nephews. How much did he give to each one?

4d

Division Problems with Remainders

Activity A

How many, or how much is left over when:

1. 321 coconuts are shared between 12 bags?
2. 527 passengers want to travel in 21 buses that will seat 25 people each?
3. \$4,327 is shared between 11 prize winners?
4. 1,358 biscuits are put into packets of 12?
5. 2,905 exercise books are packed into parcels of 25?
6. 3,444 metres of material are cut into pieces 50 metres?
7. 1,576 pencils are put into packs of 15?
8. \$5,842 is divided between 35 schools?

Remainder Reminder!

If there is anything left over, we call it the remainder.



Activity B

Copy and complete these division sums in your exercise book.

1. $11 \overline{) 585}$

2. $14 \overline{) 453}$

3. $21 \overline{) 676}$

4. $38 \overline{) 8369}$

5. $22 \overline{) 8960}$

6. $41 \overline{) 8699}$

Unit 1

Solve these problems. Show your working out.

7. A farmer had 682 palm seedlings. He planted them in rows of 15. How many rows did he make? Were any seedlings left over?
8. If we collect 1,543 coconuts how many sacks can we fill if we put 25 in each sack? Will there be any left over?
9. The province has donated \$9,650 to share between 17 schools for sports equipment. How much will each school get?
10. 13 fishermen working on a catcher boat caught a total of 6,734 fish in a month. How many fish did they each catch?

Activity C

Read each problem carefully and decide what you must do first, before you can work out the answer. Show all your working out in your exercise book.

1. 1,235 eggs were collected at the poultry project. The eggs were packed into boxes of one dozen. When the packing was completed one box was not full. How many eggs were in this last box?
2. If a tractor and trailer can carry 27 logs at a time how many trips would be needed to move 3,546 logs? How many logs would be on the last load?
3. 165 rows of seedlings are planted out in the oil palm plantation. There are 33 seedlings in each row
 - a. How many seedlings are there altogether?
 - b. If 25 seedlings had been planted in each row instead of 33, how many rows would there be?
 - c. How many seedlings would be in the last row?
4. Rice is packed in 20 kg bags. How many bags are in a shipment of 3 tonnes of rice?

5a

Mixed Computation

Activity A

Copy each sum and calculate the answer. Show all your working out.

- | | |
|-------------------------|---------------------------|
| 1. $41 \times 4 - 38 =$ | 5. $876 \times 76 + 9 =$ |
| 2. $56 + 38 - 55 =$ | 6. $21 \times 6 - 90 =$ |
| 3. $96 - 6 \times 15 =$ | 7. $41 + 966 \div 21 =$ |
| 4. $768 + 180 - 656 =$ | 8. $1,218 \div 14 + 34 =$ |

Remember BODMAS!

**Brackets first, then
Division, Multiplication,
Addition and
Subtraction last.**



Activity B

Read the problem below carefully and answer the questions. Set out your sums carefully in your exercise book and show all your working out.

Tome started a poultry project with 2,368 chickens. After a few months he bought another 358. Each chicken laid an average of 16 eggs per month.

The following year, Tome's neighbour decided that he also wanted to start a poultry project, so Tome gave him 1,200 of his chickens.

1. How many chickens was Tome left with after giving some to his neighbour?
2. After some weeks his neighbour sold some of the chickens. He kept only 543. How many chickens did he sell?
3. How many eggs did the neighbour collect on average every month before he sold any chickens?
4. How many eggs did Tome collect in a whole year after he had given away 1,200 chickens?

5b

Problem Solving

Activity A

1. There are 25 boys and 16 girls in Standard 6. If each pupil brought in \$5 for the end of term party, how much would the class have to spend?
2. In a school with 15 teachers and 570 pupils there was a bad outbreak of flu. 43 pupils and 5 teachers were absent. How many people were in school?
3. There are 28 pupils in each class and each pupil needs 4 exercise books. How many exercise books should the teacher order for Class 5 and Class 6?

Remember!

First decide what the problem is asking for, then decide which operations you will need to find the answer.



Activity B

Discuss these problems with your partner and work out the answers together. Write your working and your answers in your exercise book.

1. Some Standard 6 pupils made ring cakes to sell for their class fundraising. Joyce made 112, Augustine made 128, Linda made 85 and Jackson made 156. How much money will they raise if they sell all their ring cakes at 50c each?
2. Three brothers earned a total of \$450 for painting a house. They worked for five days. How much did each brother earn a day?
3. If a tailor can make three uniforms out of 6 m of cloth. How much cloth will she need to make 14 uniforms?

Unit 1

Activity C

Study the shopping list on the right and answer the questions in your exercise book. Show your working out.

1. What is the total cost of everything on the list?
2. How much change would I get back from \$200 if I bought everything on the list?
3. Which other item could I buy to use up all my change?
4. How many packets of noodles could I buy with the change?

5 tins of taiyo - \$3.50 each
5 tins Solomon blue taiyo - \$4.80 each
4 packets of noodles - \$2.00 each
2 pkt washing powder - \$2.50 each
2 pkt swimming soap - \$1.80 each
1 tin Milo - \$22.80
2 pkt tea leaf - \$1.80 each
1 tin milk - \$16.00
1 bag 20 kg rice - \$83.50

6a

Revising Negative Numbers

Activity A

Look at these groups of numbers. Arrange each group in ascending order starting with the smallest.

1. 0, -1, 6, 2, -15, 12, -3, -2
2. -12, 4, 0, -9, -10, 3, -4,
3. 5, -4, -7, 0, 3, -1, 6, -6, -5

Reminder

> means greater than
< means less than

Compare these pairs of numbers using 'greater than' and 'less than'.

Copy out each pair and write < or > in the space.

4. -2 -4 7. 0 -3
5. -19 -52 8. -11 -1
6. 0 5



Activity B

Add these. You can use a number line to help you.

1. $-5 + 3 =$
2. $6 + 9 =$
3. $-5 + (-9) =$
4. $-9 + 5 =$
5. $-2 + (-2) =$
6. $-9 + (-5) =$
7. $-5 + (-1) =$
8. $4 + (-7) =$

Subtract these. You may use a number line to help you.

9. $9 - 5 =$

11. $9 - (-5) =$

13. $-6 - 10 =$

15. $-4 - (-1) =$

10. $-9 - 5 =$

12. $6 - 10 =$

14. $-7 - 8 =$

16. $-3 - 8 =$

Activity C

Work out the answers. Remember to look carefully at the signs.

1. $-25 + 13 =$

4. $-24 + 63 =$

7. $-23 + (-18) =$

10. $-52 + 55 =$

2. $56 + 29 =$

5. $-17 + (-29) =$

8. $74 + (-39) =$

11. $29 - 35 =$

3. $-37 + (-19) =$

6. $43 + (-15) =$

9. $22 + (-34) =$

12. $-38 - 25 =$

6b

Negative Number Calculations

Activity A

Write a positive or negative number to describe each statement. The first one has been done for you.

1. You owe somebody fifteen dollars. **(- \$15)**
2. You earn 250 dollars.
3. There are 7 new students in the school.
4. You lost 4 pencils this week.
5. You dive 8 m down to the seabed to collect some clams.
6. The temperature is 16° below freezing.
7. Your village is 200 m above sea level.
8. The temperature is 20° above zero.

Activity B

1. In a village high in Himalayan Mountains, the highest temperature recorded in the day is -4°C . If the temperature drops by 25° during the night what is the night time temperature?
2. In Iceland, the lowest temperature at night is -19°C what will the daytime temperature be if there is a 16° rise?
3. If low tide is 2 metres below sea level and high tide is 1 metre above sea level what is the range of tidal change?
4. A shopkeeper imported 7 crates of tinned beef from Australia for \$2,500. There were 30 tins in each crate. He sold half of the tins of beef in his shop for \$13 a tin. The rest he sold in his Christmas sale for \$10 a tin. Did the shopkeeper make a profit or a loss? Work out how much profit or loss he made.

Unit 1

5. I import 12 rolls of material from China. Each roll is 50 metres long. I pay \$360 for each roll as well as \$480 for the total shipping costs.
 - a. For how much, per metre, must I sell my material if I am to make a profit of 100%?
 - b. If I sell the material for \$7 a metre how much money will I lose?

Activity C

Charles Manua opened a new bank account in July 2004. Study the pages from his bank book below and answer the questions in your exercise book.

BANK OF NGUZU NGUZU			Date	Deposit	Withdrawal
Account Name: Charles Manua			06. 01. 05	\$500	
Account Number: 2345617			12. 01. 05		\$450
			30. 01. 05		\$183
			01. 02. 05	\$480	
			05. 03. 05	\$500	
			03. 04. 05	\$400	
			14. 04. 05		\$35
			02. 05. 05	\$500	
			01. 06. 05	\$500	
			15. 06. 05		\$1,800
			20. 06. 05		\$50

Date	Deposit	Withdrawal
06. 07. 04	\$500	
05. 08. 04	\$500	
06. 09. 04	\$500	
01. 10. 04	\$500	
05. 10. 04		\$750
25. 10. 04		\$800
01. 11. 04	\$500	
18. 11. 04		\$1,000
01. 12. 04	\$500	
20. 12. 04		\$820
29. 12. 04		\$960

1. On average, how much does Charles put into his bank account every month?
2. How much money did Charles withdraw in December?
3. Work out the balance for Charles at the end of 2004. Is he in credit or in debit and by how much?
4. How much did Charles withdraw between the beginning of October 2004 and the end of May 2005?
5. What is the balance in his account on 20.06.05?
6. On 30.06.05 the balance in the account is \$0. What did Charles do on that day? Did he put money in or take it out?

Work out how much he had to deposit or withdraw to make the closing balance \$0.

Check Up Page

Copy and calculate each sum. Show all of your working.

$$\begin{array}{r} 1. \quad 324,120 \\ + 32,266 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 17,604 \\ + 485,396 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 56,430 \\ - 13,010 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 926,481 \\ - 77,230 \\ \hline \end{array}$$

Work out an estimated answer for these calculations. Estimate to the nearest thousand.

$$5. \quad 24,356 + 20,254 =$$

$$9. \quad 34,599 - 10,500 =$$

$$6. \quad 12,561 + 10,455 =$$

$$10. \quad 239,666 - 20,455 =$$

$$7. \quad 34,899 + 10,090 =$$

$$11. \quad 199,689 - 9,899 =$$

$$8. \quad 123,067 + 129,911 =$$

$$12. \quad 107,334 - 99,501 =$$

Calculate the answers to the following.

$$13. \quad \begin{array}{r} 208 \\ \times 27 \\ \hline \end{array}$$

$$14. \quad \begin{array}{r} 913 \\ \times 74 \\ \hline \end{array}$$

15. There are 168 hours in a week. There are 52 weeks in a year. How many hours are there in 1 year?

Work out the answers to these calculations. Set out your work carefully.

$$16. \quad 432 \div 27 =$$

$$17. \quad 7,760 \div 11 =$$

$$18. \quad 3,024 \div 16 =$$

$$19. \quad 3,404 \div 14 =$$

Calculate the following. They include more than one operation.

$$20. \quad 480 \div 24 \times 30 =$$

$$21. \quad 67 \times 12 + 150 =$$

$$22. \quad 200 - 4 \times 14 =$$

$$23. \quad (34 - 19) \times 10 =$$

$$24. \quad (65 \div 5) + (11 \times 9) =$$

$$25. \quad 100 + 24 \div 4 =$$

26. Luke has 2,200 vanilla plants on his farm. He harvests 13 kg of vanilla beans every day except Saturday.

a. How many kilograms will Luke harvest in four weeks?

b. How many kilograms will he harvest in one year?

$$27. \quad 32 - 29 =$$

$$28. \quad 57 - 59 =$$

$$29. \quad 14 + 12 - 30 =$$

$$30. \quad -5 + (-23) =$$

2b

Calculating Distance

Remember the Formula!

Distance = Speed x Time



Activity A

The table shows the time taken for five different runners to finish their races at the school sports day. Copy and complete the table by working out the distance of each race. The first one has been done for you.

Runner	Speed	Time	Distance
Josephine	8 m/s	12.5 seconds	100 m
Emma	4 m/s	25 seconds	
George	5 m/s	10 seconds	
Danny	10 m/s	20 seconds	
Sarah	12 m/s	12.5 seconds	

Activity B

Calculate the distance covered in each of the following. Write your answer in your exercise book in metres or kilometres.

1. The MV Temotu takes 8 hours to travel from Honiara to Yandina. Its average speed is 20 km/h. What is the distance between the two ports?
2. A long distance runner took 3h 30m to complete a race. If his average speed was 5 km/h how long was the race?
3. A woman takes 30 minutes to paddle from her home to her garden every morning. She paddles at a speed of 2 km/h. What is the distance between her home and her garden?
4. The Solomon Airlines Boeing 737 plane flies at an average speed of 575 km/h. If the flight from Honiara to Brisbane takes 3 hours, how far apart are the two cities?
5. If it takes Sophie 10 minutes to walk to school and she walks at an average speed of 50 m/m how far away is her school?

Activity C




Copy and complete the following table, which shows a tri-athlete's performance in three different events.

	Event	Time	Speed	Distance
1.	Cycling	15 minutes	36 km/h	
2.	Running	24 minutes		12 km
3.	Swimming		2 km/h	1,000 m

3a Applying the Formula

Activity A

Use the formula you have learned to work out the answers to each of the following problems. Write your answers in your exercise book.

1. A man walks at a speed of 4 km/h. **How far** can he walk in:
a. 2 hours b. 5 hours c. 3  hours?
2. Find the **speed** the truck travels for each of the following journeys. Write your answer in **km/h**.
a. 180 km in 3 hours b. 60 km in  hour c. 200 km in 2  hours
3. A truck travels 120 km/h. **How long** would it take it to travel
a. 60 km b. 240 km c. 300 km?


Activity B

Read each problem carefully. First identify the unknown, then work out how you can apply the formula to find the answer.

1. During a primary school sports day, Michael ran a 100 metre race in 20 seconds. Calculate Michael's speed.
2. It took Mary 60 minutes to walk to from her parent's village to her aunt's village. If the two villages were 5 kilometres apart at what speed did she walk?
3. The M.V. Tomoko takes 20 hours to travel from Honiara to Gizo. If the distance between Honiara and Gizo is 740 km, calculate the average speed of the ship.
4. 15 men took part in a paddle canoe race to raise funds to build a village clinic. The race was 2 km long and it took the first canoe 20 minutes to get to the finishing line. What was the speed of the winning canoe?
5. A tractor travelling between two villages 5 km apart took 30 minutes. Calculate the speed of the tractor in km/h.

Activity C

Solve the following problems. Show all your working out in your exercise book.

1. A truck can drive 963 km in 9 hours. What is its average speed?
2. If James walks at a speed of 5 km/h and has to walk 2.5 km to church. What time will he have to leave home if the service starts at 8 a.m.
3. A marathon race is approximately 42.5 kilometres long. A good time is 2  hours. What average speed does this represent?

Unit 2

high speed train travels at a maximum speed of 208 km/h. At this speed, how far can the train travel in 3 hours?

5. The Flying Scotsman is a train in Britain. It averages 150 km/h for a trip of 525 kilometres. How long does the trip take?
6. While Selwyn was studying in Australia. He took his family on holiday leaving home very early Monday morning at 1 a.m. They stopped for breakfast for two hours and lunch for three hours on the way and they arrived at the hotel at 5 p.m. The hotel was 869 kilometres from their home. What was their average speed on the journey?
Be careful! Do not include the time that they stopped for a break in your calculation.
7. Mr. and Mrs. Pikacha left home in their canoe at 6 a.m. to travel to a wedding at a village 55 km away. If they travelled at an average speed of 10 km/h what time would they arrive at the wedding?
8. What is the average speed of a bus which covers 260 kilometres in 4 hours?

Check Up Page

Look at the diagram below. Copy the sentences and fill in the missing words.



1. The space between tree A and tree B is called the _____.
2. How long it takes for the bird to fly from Tree A to tree B is called the _____.
3. How fast the bird travels is called the _____.
4. What formula would you use to calculate the **speed** at which an object travels?
5. **Fill in the missing words in each of the following:**
 - a. distance = speed x _____
 - b. time = $\frac{\text{distance}}{\text{speed}}$

Calculate the following using the formula you have learnt.

6. My grandfather walks at 6 km/h. How far will he walk if he walks for:
 - a. 3 hours?
 - b. 2 $\frac{1}{2}$ hours?
 - c. 20 minutes?
7. A cyclist can ride at 14 km/h. How long would it take him to travel:
 - a. 28 km?
 - b. 49 km?
 - c. 7 km?
8. Find the speed of the following in metres per minute (m/m).
 - a. 50 m in 10 minutes
 - b. 2 m in 30 seconds
 - c. 6 km in 1 hour
9. It took Daniel 7 hours to travel from his home island to Honiara in his uncle's canoe. His speed was 15 km/h. How far away was his home island from Honiara?
10. The Agricultural Officer went to visit a Rural Training Centre in Malaita Province by truck. The Rural Training Centre was 80 km, by road, from Auki.
 - a. If he travelled at an average speed of 40 km/h how long did the journey take?
 - b. He went again the following month, after there had been a lot of rain that damaged the road. This time the journey took him 3 hours 20 minutes. What was his average speed?
 - c. The same officer took the truck to another Rural Training Centre on a different road. This road was good and he averaged 44 km/h. If he completed the journey in 1 $\frac{1}{2}$ hours, how far away was the RTC?

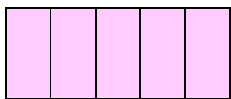
1a

Revision of Equivalent Fractions

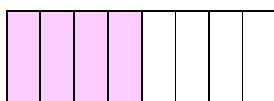
Activity A

Look at the shapes below. In your exercise book, write down the fraction of each shape that is shaded

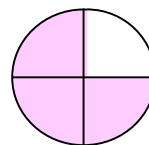
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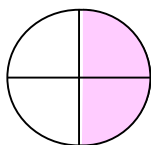
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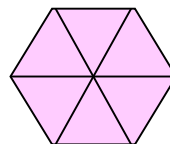
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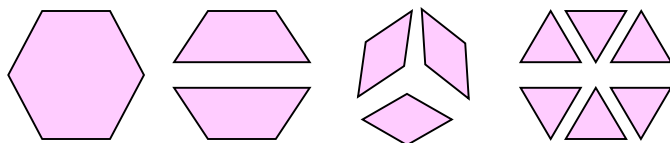


6.



7. The above shapes include three pairs of equivalent fractions. Sketch each pair in your exercise book and write the fractions using the correct notation.

These pattern blocks show the hexagon and parts of a hexagon.



Use the pattern blocks to show that:

8. $\frac{1}{3} = \frac{2}{6}$

9. $\frac{1}{2} = \frac{3}{6}$

10. Sketch and write some other equivalent fractions that you can show with these pattern blocks.

Activity B

Complete the following sets of equivalent fractions in your exercise book.

1. $\frac{1}{2} = \frac{\quad}{4} = \frac{\quad}{8} = \frac{5}{\quad} = \frac{6}{\quad} = \frac{7}{\quad} = \frac{8}{\quad} = \frac{18}{\quad}$

2. $\frac{1}{3} = \frac{2}{6} = \frac{\quad}{9} = \frac{4}{12} = \frac{\quad}{15} = \frac{6}{\quad} = \frac{7}{\quad} = \frac{8}{\quad}$

$$3. \quad \frac{1}{4} = \frac{2}{8} = \frac{3}{12} = \frac{4}{16} = \frac{5}{20} = \frac{6}{24} = \frac{7}{28} = \frac{8}{32}$$

$$4. \quad \frac{1}{5} = \frac{2}{10} = \frac{3}{15} = \frac{4}{20} = \frac{5}{25} = \frac{6}{30} = \frac{7}{35} = \frac{8}{40}$$

$$5. \quad \frac{1}{6} = \frac{2}{12} = \frac{3}{18} = \frac{4}{24} = \frac{5}{30} = \frac{6}{36} = \frac{7}{42} = \frac{8}{48}$$

1c Simplifying Fractions

Activity A

Reduce these fractions to their simplest form. Write your answers in your exercise book.

$$1. \quad \frac{10}{12}$$

$$2. \quad \frac{14}{18}$$

$$3. \quad \frac{6}{12}$$

$$4. \quad \frac{4}{8}$$

$$5. \quad \frac{6}{14}$$

$$6. \quad \frac{12}{24}$$

$$7. \quad \frac{6}{10}$$

$$8. \quad \frac{4}{12}$$

$$9. \quad \frac{10}{15}$$

$$10. \quad \frac{20}{25}$$

Activity B

Simplify these fractions. Write your answers as mixed numbers.

$$1. \quad \frac{9}{4}$$

$$2. \quad \frac{12}{9}$$

$$3. \quad \frac{14}{6}$$

$$4. \quad \frac{51}{17}$$

$$5. \quad \frac{22}{10}$$

$$6. \quad \frac{17}{4}$$

$$7. \quad \frac{25}{12}$$

$$8. \quad \frac{36}{6}$$

$$9. \quad \frac{45}{20}$$

$$10. \quad \frac{28}{7}$$

Activity C

Change these mixed numbers to improper fractions.

$$1. \quad 3\frac{1}{2}$$

$$2. \quad 1\frac{3}{7}$$

$$3. \quad 5\frac{2}{3}$$

$$4. \quad 10\frac{1}{4}$$

$$5. \quad 4\frac{2}{9}$$

$$6. \quad 7\frac{2}{5}$$

$$7. \quad 3\frac{6}{7}$$

$$8. \quad 1\frac{3}{25}$$

Unit 3

9. $6\frac{1}{7}$

10. $3\frac{3}{10}$

11. $7\frac{1}{8}$

12. $6\frac{3}{5}$

2a

Fraction Addition

Don't Forget!

Reduce all your answers to their simplest form.



Activity A

Copy and answer the following additions in your exercise book. Simplify your answers where you can.

1. $\frac{3}{5} + \frac{1}{5} =$

2. $\frac{5}{7} + \frac{1}{7} =$

3. $\frac{8}{11} + \frac{2}{11} =$

4. $\frac{1}{12} + \frac{5}{12} =$

5. $\frac{9}{20} + \frac{2}{20} =$

6. $\frac{4}{9} + \frac{2}{9} =$

7. $\frac{7}{12} + \frac{5}{12} =$

8. $\frac{9}{16} + \frac{5}{16} =$

Activity B

Copy and answer the following additions in your exercise book.

1. $5\frac{3}{5} + 2\frac{1}{5} =$

2. $6 + 2\frac{1}{2} =$

3. $24\frac{2}{9} + 7\frac{5}{9} =$

4. $12\frac{3}{8} + 11\frac{1}{8} =$

5. $5\frac{3}{4} + \frac{1}{4} =$

6. $10\frac{1}{7} + 1\frac{4}{7} =$

7. $19\frac{1}{6} + 8\frac{2}{6} =$

8. $8 + 3\frac{1}{5} =$

9. $8\frac{4}{7} + 2\frac{2}{7} =$

10. $5\frac{3}{8} + 6\frac{1}{8} =$

11. $34\frac{3}{5} + 1\frac{1}{5} =$

12. $4\frac{1}{6} + 12\frac{2}{6} =$

Activity C

Read each problem carefully and calculate the answer. Show your working out as well as your answer in your exercise book.

1. John has \$20 and spends $\frac{1}{4}$ of it on a film and $\frac{1}{2}$ of it on a T-shirt. How much money does he have left?
2. Joan spends $\frac{3}{8}$ her pocket money on food and $\frac{5}{8}$ of it on a present for her sister. What fraction of her pocket money does she have left?

3. If it takes Peter $\frac{3}{4}$ of an hour to write one page of an essay, how long will it take to write 7 pages?
4. Mary made a chocolate cake and a banana cake for the school fundraising. She cut each one into 8 slices. She sold all, except one slice, of the chocolate cake but only five slices of the banana cake.

What fraction of her cakes did she sell altogether?

$$5. 12\frac{13}{20} + 8\frac{11}{20} = \quad 6. 26\frac{4}{7} + \frac{5}{7} = \quad 7. 2\frac{11}{15} + 5\frac{8}{15} =$$

2b

Fraction Subtraction

Activity A

Find the difference between these fractions. Copy the sums and write the answers in your exercise book. Simplify your answers.

$$1. \frac{7}{9} - \frac{2}{9} = \quad 2. \frac{6}{7} - \frac{1}{7} = \quad 3. \frac{6}{10} - \frac{4}{10} = \quad 4. \frac{7}{8} - \frac{5}{8} =$$

$$5. \frac{11}{20} - \frac{9}{20} = \quad 6. \frac{5}{12} - \frac{3}{12} = \quad 7. \frac{8}{9} - \frac{1}{9} = \quad 8. \frac{5}{6} - \frac{2}{6} =$$

Activity B

Copy and complete the following subtractions in your exercise book. Write your answers in lowest possible terms.

$$1. 8\frac{1}{7} - 1\frac{3}{7} = \quad 2. 6\frac{2}{9} - 1\frac{5}{9} = \quad 3. 5\frac{2}{5} - \frac{4}{5} = \quad 4. 6 - \frac{9}{10} =$$

$$5. 12\frac{2}{5} - \frac{4}{5} = \quad 6. 1\frac{2}{9} - \frac{7}{9} = \quad 7. 19\frac{5}{8} - 8\frac{7}{8} = \quad 8. 8\frac{1}{5} - 3\frac{4}{5} =$$

$$9. 7\frac{4}{5} - \frac{1}{5} = \quad 10. 15\frac{6}{7} - \frac{1}{7} = \quad 11. 2\frac{3}{5} - \frac{2}{5} = \quad 12. 8\frac{3}{4} - 3\frac{3}{4} =$$

Unit 3

Activity C

Copy and answer the questions below in your exercise book. Write your answers in the lowest possible terms.

1. Nick bought 25 metres of fabric and sold $21\frac{3}{4}$ metres. How many metres did he have left?
2. One customer bought $3\frac{1}{2}$ metres of fabric to make a skirt. She used $2\frac{1}{4}$ m. How much fabric was left over?
3. Tom and James measured the wall to find how much timber to buy for their book shelves. The length of the wall was $1\frac{2}{3}$ metres.

When the timber was delivered they found that it was $2\frac{1}{2}$ metres long. What length of timber will they need to saw off?

3a

Adding Fractions with Different Denominators

Activity A

Copy and complete these sums in your exercise book. Show all your working out and simplify your answers.

Remember!

First find a common denominator.

1. $\frac{1}{4} + \frac{1}{3} =$

2. $\frac{1}{3} + \frac{1}{9} =$

3. $\frac{1}{5} + \frac{1}{4} =$

4. $\frac{1}{2} + \frac{1}{11} =$

5. $\frac{1}{7} + \frac{1}{6} =$

6. $\frac{1}{3} + \frac{1}{7} =$

7. $\frac{1}{5} + \frac{1}{10} =$

8. $\frac{1}{3} + \frac{1}{8} =$



Activity B

Copy and complete this activity in your exercise book. Write your answers in the lowest possible terms.

1. $\frac{2}{3} + \frac{1}{5} =$

2. $\frac{1}{7} + \frac{5}{14} =$

3. $\frac{3}{4} + \frac{5}{6} =$

4. $\frac{3}{4} + \frac{2}{7} =$

5. $\frac{2}{3} + \frac{1}{8} =$

6. $\frac{2}{5} + \frac{1}{4} =$

7. $\frac{3}{7} + \frac{1}{3} =$

8. $\frac{3}{8} + \frac{1}{4} =$

Activity C

Read each problem carefully, decide how to solve it and set the sum out as a fraction addition in your exercise book. Show all your working.

- Mr. Havea won a \$300 prize in a competition. He gave half the money to his wife and one fifth to each of his two children. What fraction of the prize did he keep for himself?
- Jemima spends one half of her monthly salary on food. She spends one quarter on school fees for her daughter and one fifth on bus fares. She saves the rest of the money in the bank.
What fraction of her salary does she save each month?
- James' family harvested 250 bags of Ngali nuts from their plantation. They sold half in the market, kept one third for themselves and gave the rest away to their friends. What fraction of the total harvest did they give away?

3b

Subtracting Fractions with Different Denominators

Activity A

Copy and calculate the following subtractions in your exercise book. Write your answers in their simplest form.

1. $\frac{1}{2} - \frac{1}{4} =$

2. $\frac{1}{3} - \frac{1}{4} =$

3. $\frac{2}{3} - \frac{1}{4} =$

4. $\frac{3}{4} - \frac{1}{2} =$

5. $\frac{3}{4} - \frac{1}{5} =$

6. $\frac{3}{4} - \frac{2}{3} =$

7. $\frac{5}{6} - \frac{1}{2} =$

8. $\frac{5}{8} - \frac{1}{2} =$

9. $\frac{7}{8} - \frac{3}{4} =$

10. $\frac{3}{5} - \frac{1}{4} =$

11. $\frac{3}{5} - \frac{1}{3} =$

12. $\frac{3}{10} - \frac{1}{5} =$

Activity B

Copy and calculate these subtractions in your exercise book. Calculate your answers in the lowest form.

1. $\frac{3}{4} - \frac{1}{3} =$

2. $\frac{1}{2} - \frac{1}{4} =$

3. $2\frac{5}{8} - 1\frac{1}{4} =$

4. $1\frac{1}{2} - \frac{1}{3} =$

5. $10\frac{1}{2} - 5\frac{1}{5} =$

6. $7\frac{1}{8} - 5\frac{1}{10} =$

7. $9\frac{3}{7} - 4\frac{1}{3} =$

8. $7\frac{7}{8} - 5\frac{2}{5} =$

Unit 3

Activity C

Read each problem carefully and work out the answer in your exercise book.

1. A large poultry project imported 2,000 day old chicks to sell. One tenth of the chicks died. One half were sold in Honiara and the rest were sold in the provinces. What fraction of the chicks were sold in the provinces?
2. If a farmer sold $\frac{2}{5}$ of his eggs on Friday and $\frac{1}{4}$ on Saturday, what fraction of his eggs did he have left over?
3. When an old man died, his land was shared between his four children. His eldest daughter got one third, and his two sons got one sixth each. How much was left for his youngest daughter?

Check Up Page

Write the answers to each question in your exercise book. Show all of your working and, where possible, simplify your answers.

1. Reduce these fractions to their simplest form.

a. $\frac{4}{10}$

b. $\frac{6}{8}$

c. $\frac{12}{36}$

d. $\frac{18}{48}$

e. $\frac{18}{42}$

2. Write down two equivalent fractions for each of the following.

a. $\frac{1}{2}$

b. $\frac{3}{4}$

c. $\frac{7}{8}$

d. $\frac{16}{24}$

e. $\frac{50}{80}$

Complete the following fraction calculations. Look carefully at the signs as some are addition and some are subtraction.

3. $\frac{4}{10} + \frac{3}{10} =$

7. $2\frac{1}{3} - 1\frac{2}{3} =$

11. $2\frac{3}{7} + 5\frac{6}{7} =$

4. $\frac{6}{8} + \frac{4}{8} =$

8. $\frac{3}{4} - \frac{1}{3} =$

12. $1\frac{1}{2} - \frac{4}{10} =$

5. $\frac{6}{10} + \frac{2}{3} =$

9. $1\frac{4}{5} - \frac{3}{4} =$

13. $3\frac{3}{4} + 4\frac{5}{7} =$

6. $\frac{7}{8} - \frac{3}{8} =$

10. $5\frac{1}{6} - 3\frac{2}{6} =$

14. $12\frac{3}{10} - 9\frac{5}{8} =$

Solve the following fraction problems.

15. Susan cut three cakes into eight slices each to sell in the market. She sold all of the first cake. Four slices of the second cake and 3 slices of the third.

- What fraction of her cakes did she sell altogether?
- What fraction did she have left over?

16. The principal shared an order of new exercise books between Standards 4, 5 and 6. He gave half to Standard 6 and one third to Standard 5. What fraction of the books was left for Standard 4?

17. A judge in a local court decided that a piece of land should be divided between three different landowners. The first should get three eighths of the land, and the second should get one third. How much is left for the third?

18. If Jenna spends five eighths of her salary each fortnight and gives one quarter to her mother, what fraction of her salary does she save?

Unit 4

1a

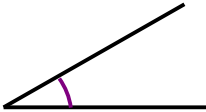
Measuring Angles with a Protractor

Activity A

Use your protractor to measure each of the following angles. Write your measurement in your exercise book and then write the name of the angle.

The first one has been done for you.

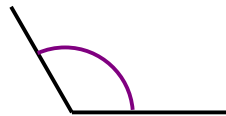
1.



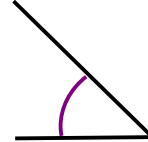
2.



3.



4.



5.



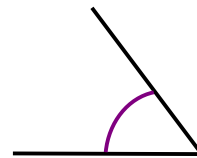
6.



7.



8.



1. 30°. Acute angle

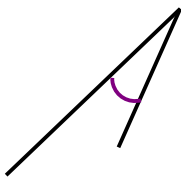
Reminder!

Use the correct notation!
Degrees is written as °

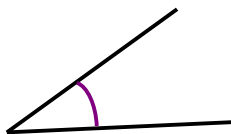
Activity B

Name, measure and describe each of the following angles. Write your answers in your exercise book.

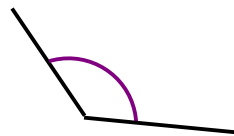
1.



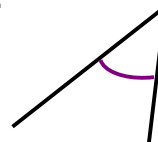
2.



3.



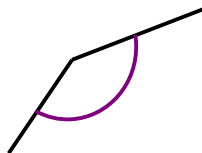
4.



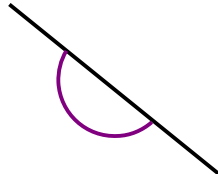
5.



6.



7.



8.



Activity C

In your exercise book, use your protractor to draw the following angles. Label each angle with the size and the name.

- | | | | |
|---------------|---------------|----------------|----------------|
| 1. 36° | 3. 45° | 5. 150° | 7. 180° |
| 2. 95° | 4. 90° | 6. 20° | 8. 110° |

9. Arrange the following terms in order of size starting with the smallest.

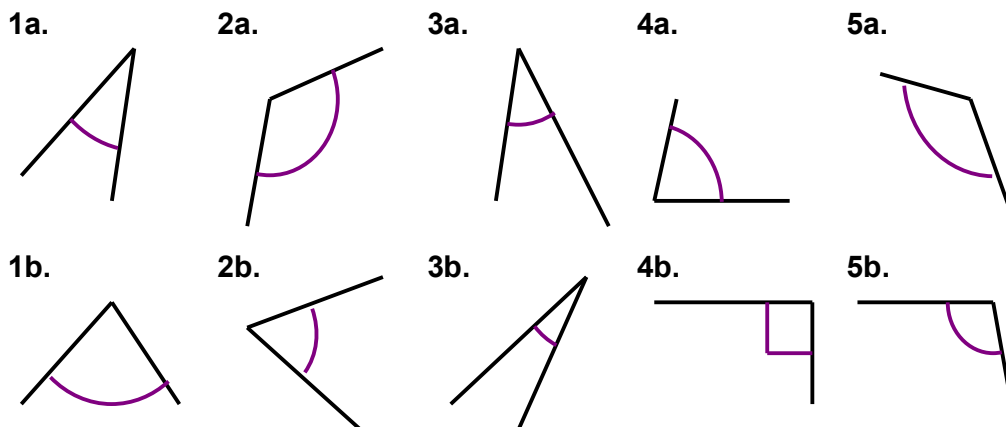
straight angle,	right angle,	reflex angle,
acute angle,	revolution,	obtuse angle,

1b

Measuring and Comparing Angles

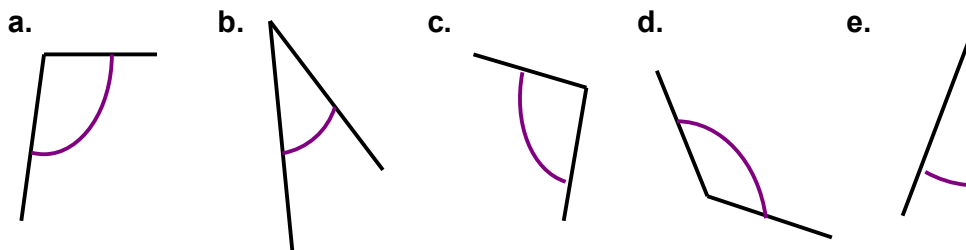
Activity A

Look at each pair of angles and decide which is larger. Write your answers in your exercise book and then use your protractor to measure and check.



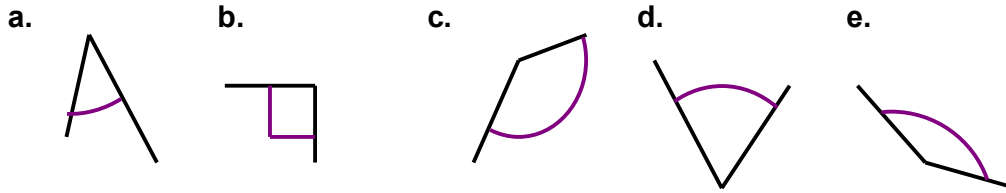
Activity B

1. Place the following angles in order of size starting with the smallest.



Unit 4

2. Place the following angles in order of size starting with the largest.

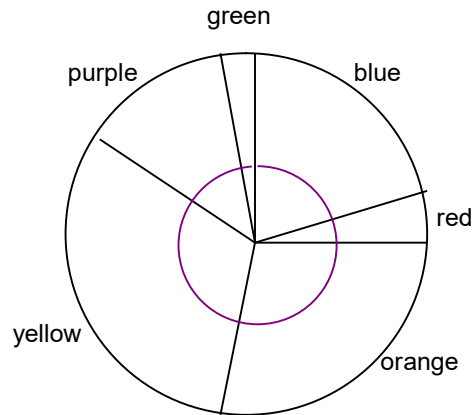


Activity C

Estimate the size of the angles on the pie chart and write them in order of size in your exercise book. Start with the smallest.

When you have finished use your protractor to measure and check your estimates.

Write your measurement next to your estimate

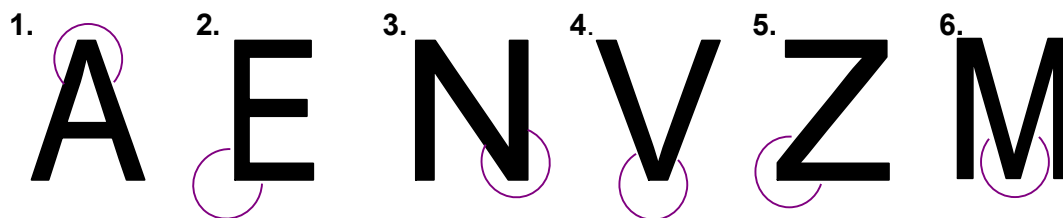


1c

Measuring Reflex Angles

Activity A

Use your protractor to measure angles shown for each letter of the alphabet. They are all reflex angles. Write your measurement in your book.



Activity B

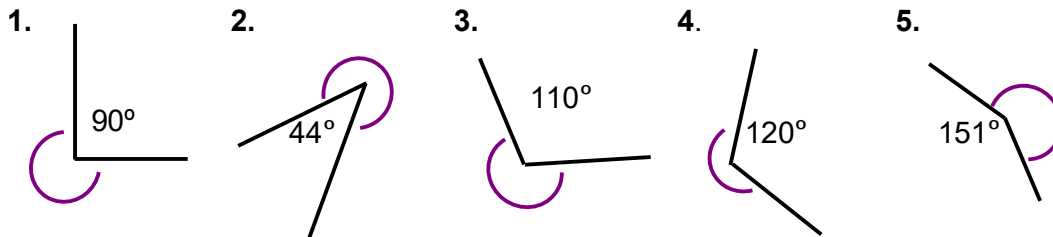
Look at each of the angles on the following page.

Use the formula you have learned to calculate the size of each marked angle. Write your calculation in your exercise book.

Remember!

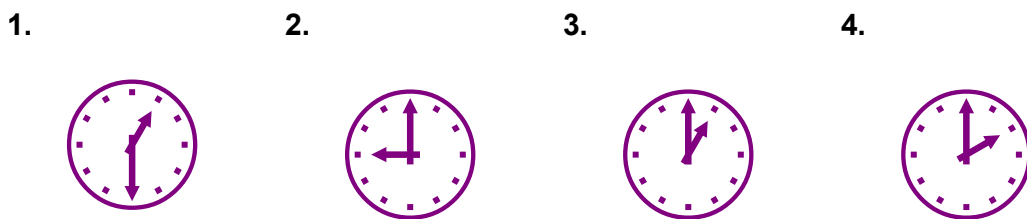
A reflex angle can be measured by measuring the inside of the angle and subtracting the measurement from 360°





Activity C

First estimate, then measure the reflex angle between the hands on each clock face shown. Write your estimate and your measurement in your book.



Now estimate the reflex angle between the hands on a clock face at the following times.

5. Quarter past eleven.
6. Half past three.
7. Twenty five past four.
8. Five past six.

Tip!

Start by working out how many degrees there are in each hour on the clock face.

Finally, try to work out a formula for calculating these angles.



1d Angles in our Everyday Lives

Activity A

Look at the village plan on the following page and answer the questions below in your exercise book.

1. If the principal comes out of her house, turns 40° clockwise and starts walking, which building will she come to first?
2. Through how many degrees will she then have to turn if she wants to walk to the market?
3. Though how many degrees would she have to turn to return to her house?

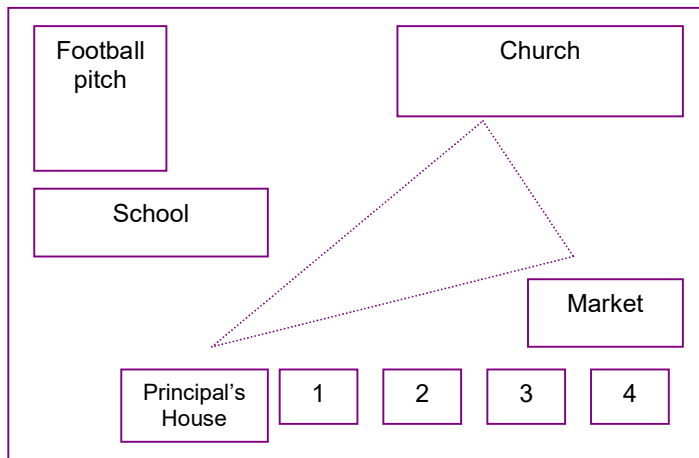
Tip!

If you find this activity difficult, try standing up and making the turns yourself. This will help you make a good estimate.



Unit 4

4. Plan a route for another trip starting at the church. Write it in your exercise book giving the directions in degrees.

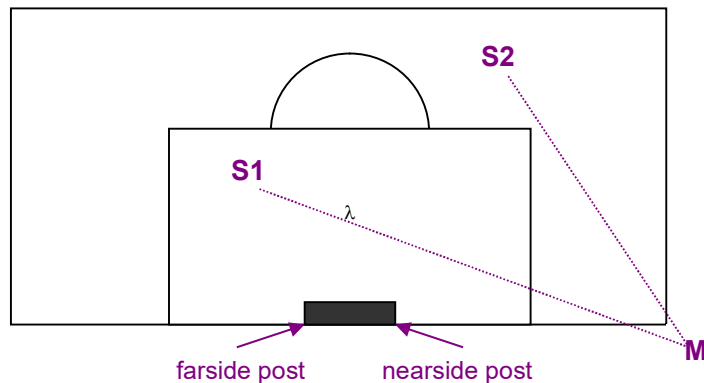


Village Plan

Activity B

The diagram shows a situation from a soccer game.

Study the diagram and discuss some of the questions with your partner.



1. If the midfielder (M) takes a corner and sends the ball straight to the striker (S1) and the striker shoots at an angle of 90° from the pass, will he score a goal?
2. At what angle would he have to shoot to score off the nearside goal post?
3. At what angle would he have to shoot to score off the far side goal post?
4. Calculate the range of angles between which striker 2 would have to shoot, in order to score, if the midfielder passed the ball directly to him.

Activity C

Read the information below carefully.

A builder plans three buildings. The first, a house, will have an iron roof. Iron is heavy so the builder does not want to roof to be too steep, but it must be steep enough to catch rainwater.

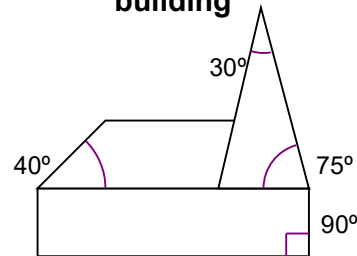
The second, a community hall, will have a leaf roof. Leaf is much lighter than iron and the builder wants a steep roof so that it will have a high ceiling to keep the building cool.

The third is a chicken house. The builder will use iron for the roof, to catch water for the chickens, but he does not want to spend too much money. He will use as little iron as possible.

Plan a design for each building in your exercise book. Draw either the side view or the front view of the frame for each building and mark the important angles in degrees.

The example on the right shows you what your side view might look like.

Side view of a church building



2b

Angles Inside Triangles and Quadrilaterals

Activity A

In this activity you will make a poster to show that the angles inside a triangle add up to 180° and the angles inside a quadrilateral add up to 360° .

Read the instructions below carefully. Work as a group.

You will need:

- a piece of chart paper
- some coloured paper
- marking pens
- scissors
- a ruler
- a protractor
- some glue

Remember the Rules!

The sum of the four internal angles of a quadrilateral is 360° .

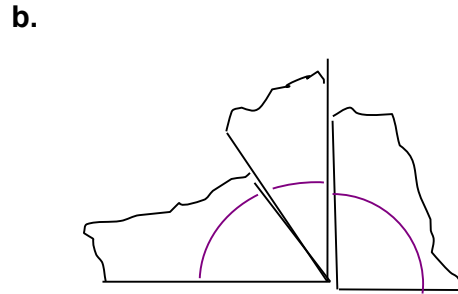
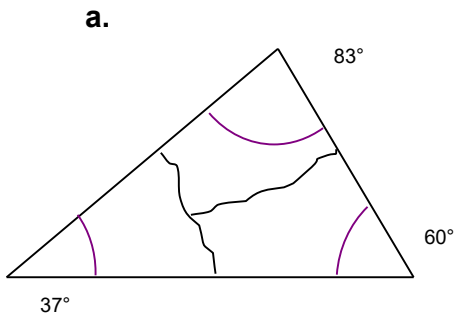
The sum of the three internal angles of a triangle is 180° .



Method

1. On a piece of coloured paper draw a large triangle.
2. Cut it out carefully and use it as a template to draw and cut out another triangle, exactly the same, on another piece of coloured paper.
3. Measure and clearly label the size of the angles on both triangles, using a protractor and a marking pen.
4. Tear one of the triangles into three pieces as shown in diagram **a** on the next page. Each piece should contain one angle or vertex.

Unit 4



- Rearrange the pieces so that the angles form a straight line, or a straight angle of 180° as shown in diagram b.
- Stick both triangles onto your chart paper and use them to make a poster explaining the rule. Write the rule clearly on your poster using a marker pen.
- Finish your poster by doing the same thing using a quadrilateral shape.

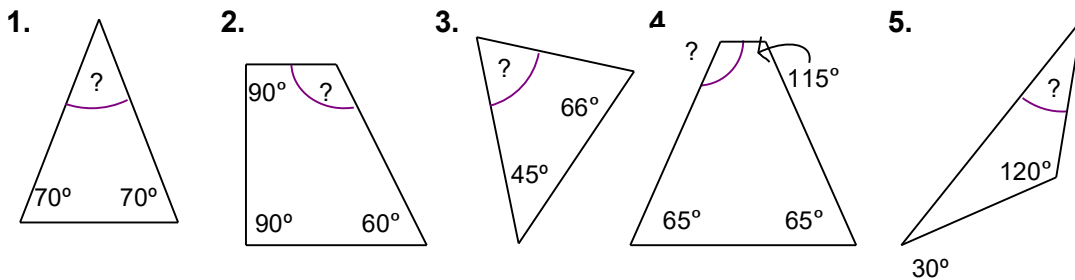
2c Calculating the Missing Angles

Activity A

Calculate the size of the missing angle in each of the shapes below. Write your answers, as well as your working, in your exercise book.

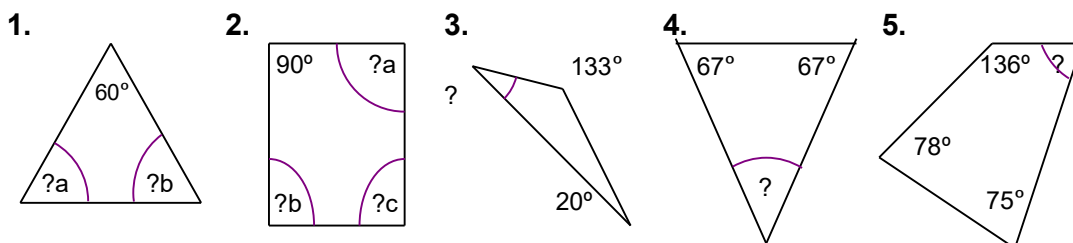
Watch Out!

You cannot use your protractor to measure these angles. You have to work them out without measuring.



Activity B

Calculate the size of the missing angles in each of the shapes below. Write your working and your answer in your exercise book.



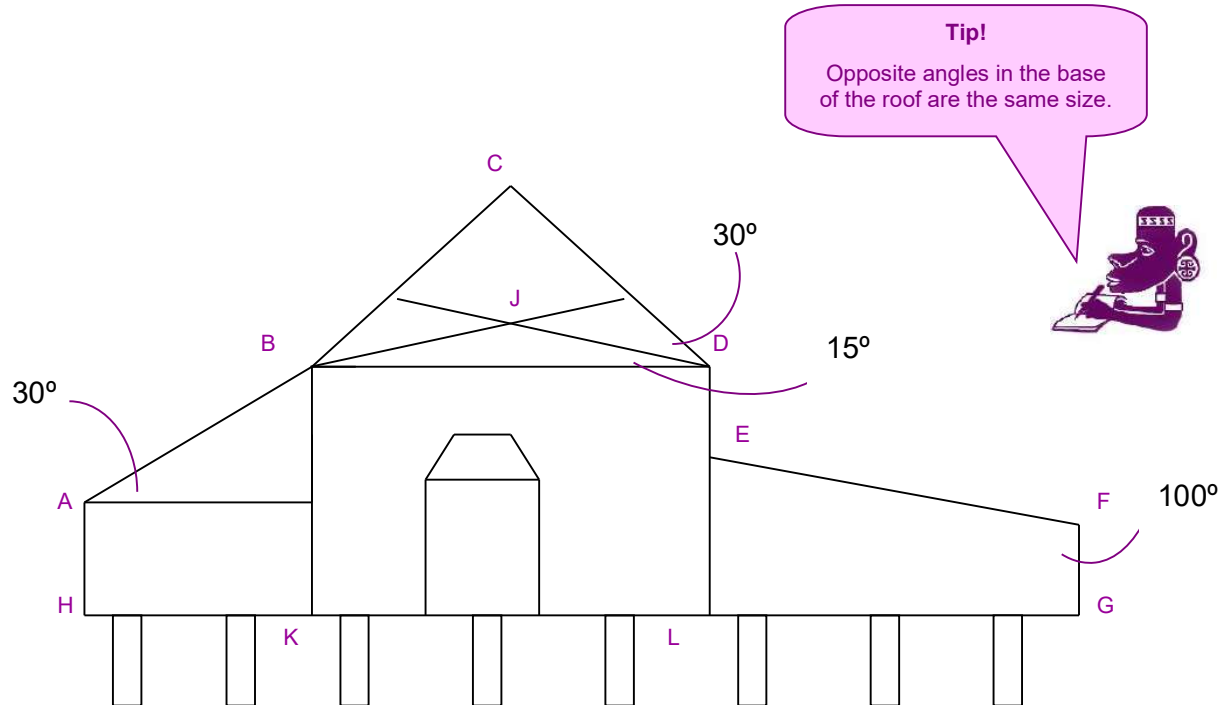
Activity C

Look carefully at the diagram below. It shows the frame of a building.

Calculate the size of the named angles without using your protractor and write the size of each named angle in your exercise book.

You do not need to draw the diagram.

1. BCD
2. BJD
3. CBD
4. FEL
5. ABK
6. BAH



3b Bearings and Maps

Study the map on the next page carefully. Notice the position of the ship.

Activity A

Give bearings for the following islands from the present position of the ship. Write your answers in your exercise book.

1. Isabel Province
2. The Marovo Lagoon
3. Malaita Province
4. Savo
5. West Guadalcanal
6. The Russell Islands

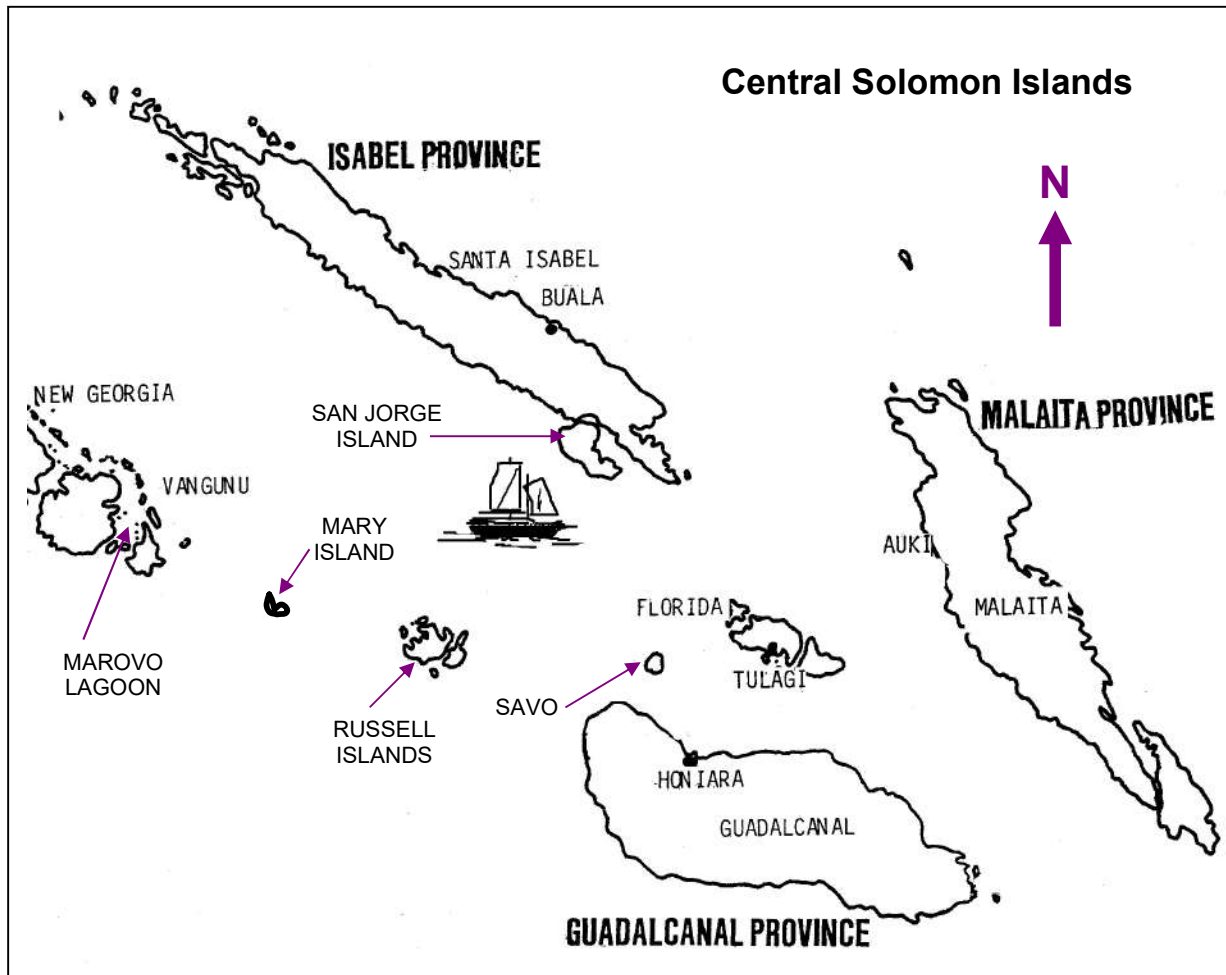
Reminder!

Bearings are measured in a clockwise direction from North, (0°).

Write your bearings as three figure numbers.



Unit 4



Activity B

Look carefully at the map above and work out where the ship would land if it set a course on each of the following bearings:

- | | | |
|----------------|----------------|----------------|
| 1. 080° | 2. 220° | 3. 150° |
| 4. 270° | 5. 350° | 6. 030° |

Now work out the bearings for a course from the present position of the ship to each of the following:

7. North end of Malaita Province.
8. Savo Island
9. Mary Island
10. South end of San Jorge Island

Activity C

Look at the map and read the following information carefully.

Imagine that the ship sent out three canoes to explore the surrounding islands.

The first travelled due west on a bearing of 090° , after discovering one island it turned and followed a bearing of 200° until it found another group of islands.

The second travelled on a bearing of 270° until it came to a group of islands. It then turned and followed a bearing of 125° to discover another small island.

The third canoe followed a steady course of 145° . It passed one small island and then discovered a much larger Island.

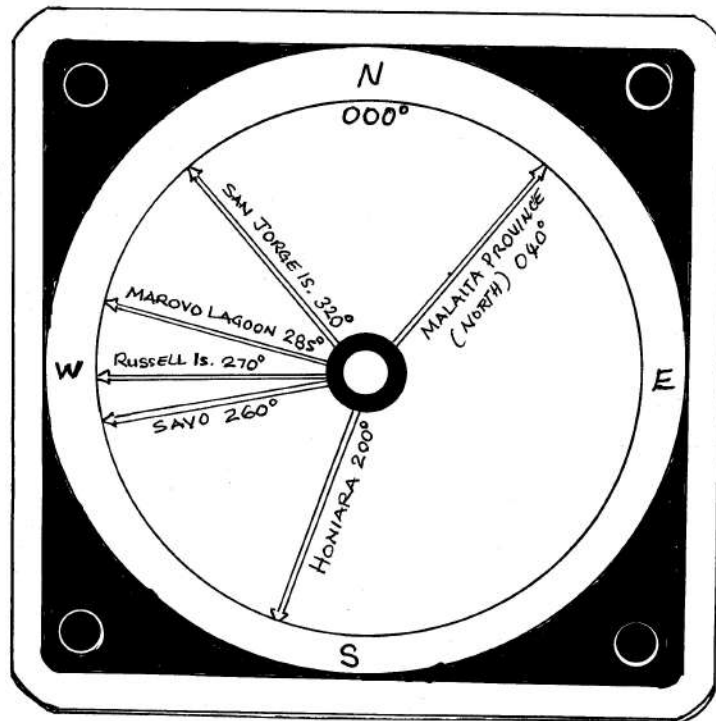
Follow the bearings to work out the course of each canoe on the map and answer the following questions in your exercise book.

1. Which islands did the first canoe reach?
2. Which islands did the second canoe discover?
3. Which island did the third canoe pass? Which one did it visit?
4. Give the correct bearing for each canoe to return to the ship after visiting the islands you have identified.

Where in the world is this?

This plaque can be found on the ground somewhere in Solomon Islands. Study the bearings it shows and try to work out where it is.

You may need a map of Solomon Islands to help you.

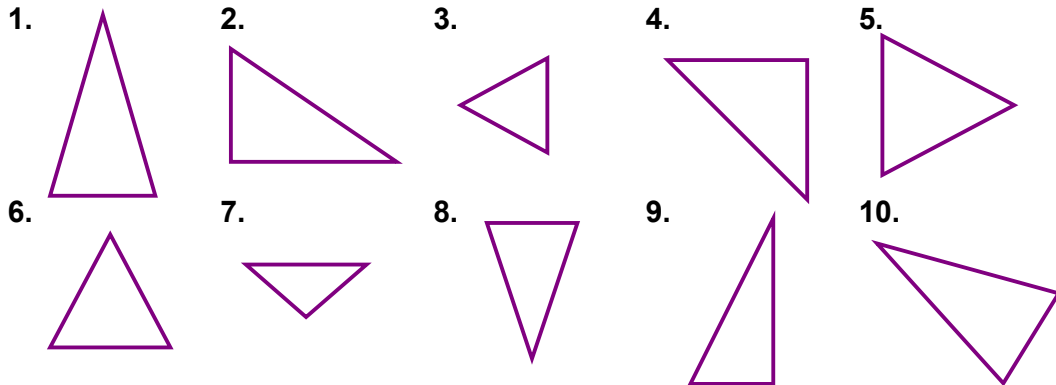


1b Classifying Triangles

Activity A

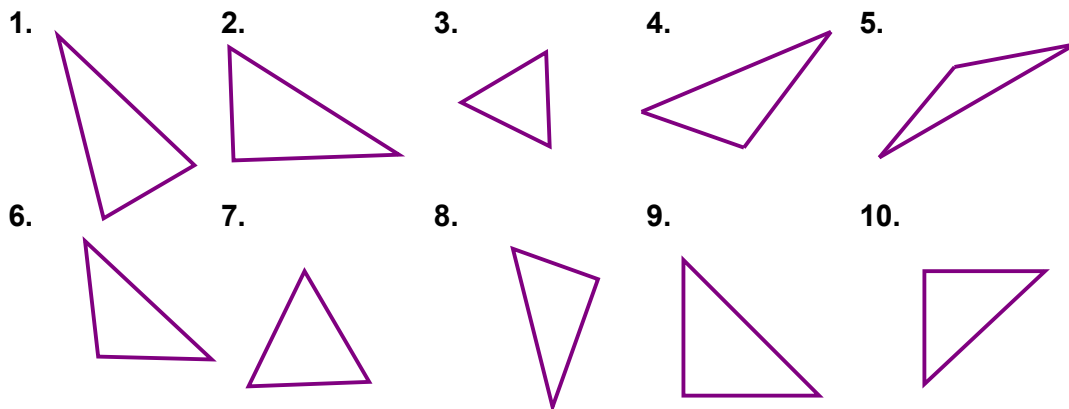
Look at the ten shapes below. They are all triangles, but each has different properties. Sort them into three different sets and sketch each set in your book.

Write the number of the triangle next to each sketch and write a sentence to explain why you have grouped them in this way.



Activity B

Look at the triangles below. There are five pairs that have similar properties. Can you find them? Write only the pairs of numbers in your exercise book, you do not need to sketch the triangles.



Activity C

In your exercise book, use your ruler to sketch each of the following pairs of triangles.

- Two different triangles containing right angles.
- Two different triangles in which all the sides are of different lengths.
- Two different triangles in which the three angles are all the same size.
- Two different triangles with two sides the same length.

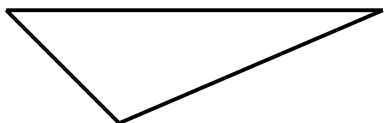
1d Classifying and Naming Triangles

Activity A

Study these triangles and classify them as equilateral, isosceles, right-angled or scalene triangles.

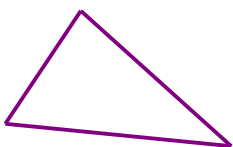
If you are not sure, use your ruler to measure the sides of each triangle.

For example:

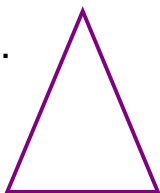


This is a **scalene triangle** because all the sides are different lengths.

1.



2.



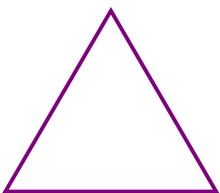
3.



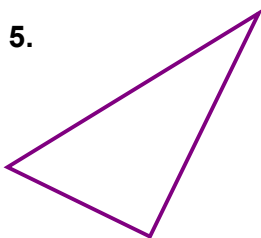
Tip!

You can look back at your Triangles Poster if you cannot remember the names of the different types of triangles.

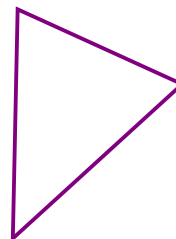
4.



5.



6.

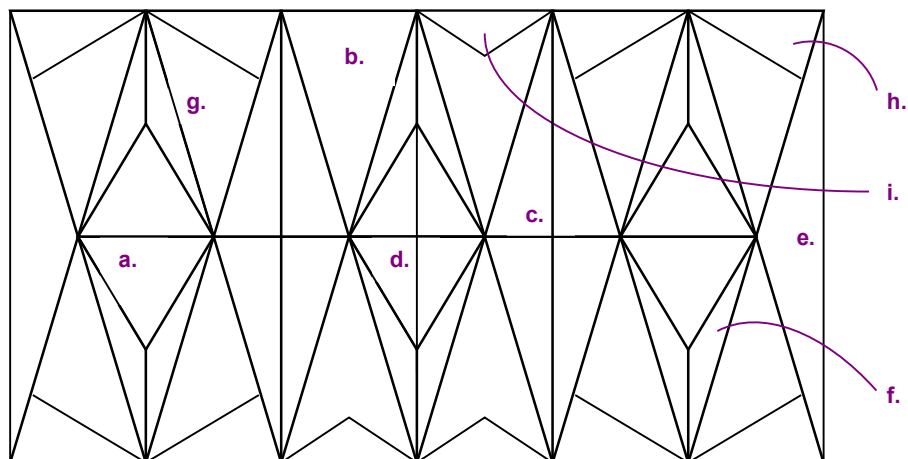


Activity B

Look at the design on the following page. It is made up of different types of triangles.

Write the following headings in your exercise book and list the letter for each shape under the right heading.

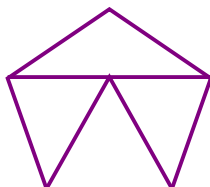
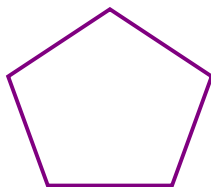
Right-angled triangle	Isosceles triangle	Scalene triangle	Equilateral triangle



Activity C

Sketch the following shapes in your exercise book. The first example has been done for you.

1. Draw a pentagon and divide it into five triangles.



2. Draw a hexagon and divide it into two isosceles triangles and two right-angled triangles.
3. Draw a rectangle and divide it into an isosceles triangle and two right-angled triangles.
4. Draw a square and divide it into four isosceles triangles that are also right-angled triangles.
5. Draw an equilateral triangle and divide it into four scalene triangles.

1e

Congruent Triangles

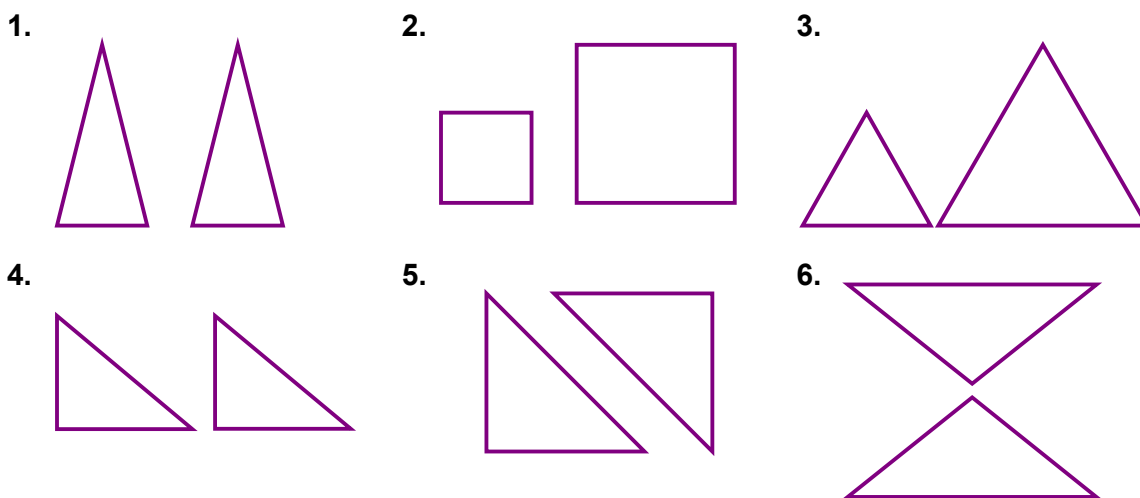
Activity A

Study the pairs of shapes on the next page. Decide which pairs are congruent, and which are not. You do not need to copy the shapes, just write your answers next to each number.

Remember!

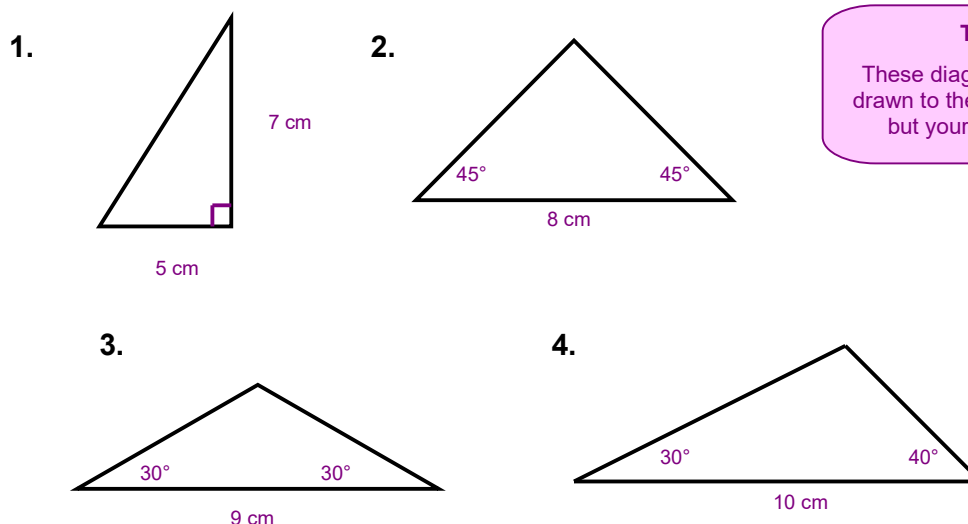
Congruent means exactly the same in every way.





Activity B

Construct triangles congruent to these in your exercise book. You will need a protractor and a ruler. Measure each side and each angle in your drawing carefully.



Tip!

These diagrams are not drawn to their actual size, but yours must be.



Activity C

Construct and label two congruent triangles in your exercise book following the instructions below. Write the answer to the questions beside your drawings.

1. A pair of right angled triangles, ABC and DEF in which the two sides forming the right angle (ABC / DEF) measure 6 cm and 8 cm.
What is the size of angles BAC and BCA?
2. A pair of isosceles triangles GHI and JKL, with a base of 5 cm in which the two angles at the base measure 70° .
What is the height of each triangle?
What is the size of the third angle?

3. A pair of scalene triangles MNO and PQR, with a base of 5 cm and internal angles at the base of 140° and 25° .

What is the length of the longest side of this triangle?

2a Constructing Triangles

Activity A

Read the instructions carefully and construct the triangles using a ruler and protractor.

1. Construct an equilateral triangle with sides 5 cm long.
2. Construct a right-angled triangle which is also an isosceles triangle.
3. Draw a rectangle and divide to make 1 right-angled triangle, 1 equilateral triangle and 1 isosceles triangle.
4. Construct a scalene triangle with a 5 cm base and internal angles of 60° , 40° and 80° .

Activity B

Construct the following triangles using the measurements given. Write the answers to the questions next to your diagrams.

1. Base 4 cm, base angles 75° and 65°
What is the size of the third angle?
2. An isosceles triangle with a base of 7 cm and base angles of 40°
What is the height of this triangle?
3. A triangle with the following angles 25° , 65° and 90°
What type of triangle is this?
4. An isosceles triangle with a base length of 8.5 cm, one base angle of 45° .
What is the length of the other two sides of this triangle?
5. A triangle with the internal angles measuring 100° , 35° and 45° and one side of 7.5 cm in length
What type of triangle is this?
What is the length of the longest side of the triangle?

Activity C

Triangle Challenge!

Now that you know how to construct a triangle when given the measurements of one side and two angles or one angle and two sides, see if you can work out your own method for constructing the following. Write down the method you used next to your diagram.

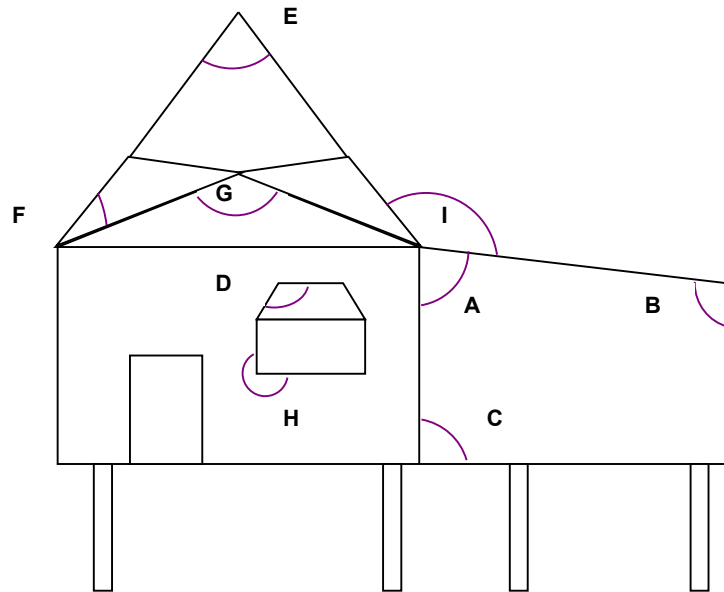
1. Construct an isosceles triangle with a base of 9 cm and a height of 5 cm. What are the three angles in this triangle?
2. Construct a right-angled triangle in which one side is twice as long as the base, which is 4 cm. What is the length of the third side?
3. Construct triangle ABC, in which angle ABC is half the size of angle BCA and angle CAB is three times the size of angle ABC. What are the three angles in this triangle?

Unit 4 Check Up Page

Check Up Page

You will need a ruler and a protractor to complete the questions in the Check Up Page. Read each question carefully.

1. First estimate, then use your protractor to measure the angles A, B, C, D, E, F, G, H and I in the diagram. Write your estimate and your measurement in your exercise book.



2. Write the meaning of each of the following terms. Illustrate your answers with sketched angles.

1. obtuse angle

d. right angle

2. reflex angle

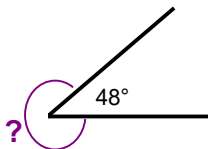
e. acute angle

3. revolution

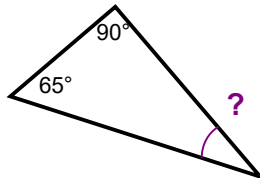
f. straight angle

3. Calculate the missing angle in each of the following diagrams. Do not use a protractor to measure the angles.

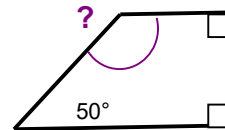
a.



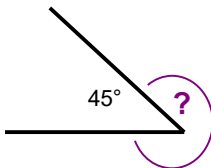
b.



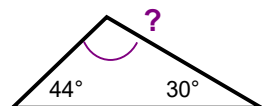
c.



d.



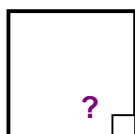
e.



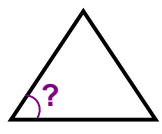
f.



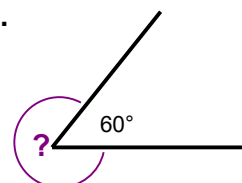
g.



h.



i.



4. Use a protractor to construct and draw the following angles.

Vertex right

a.

Acute 20°

b.

Obtuse 160°

Vertex left

c.

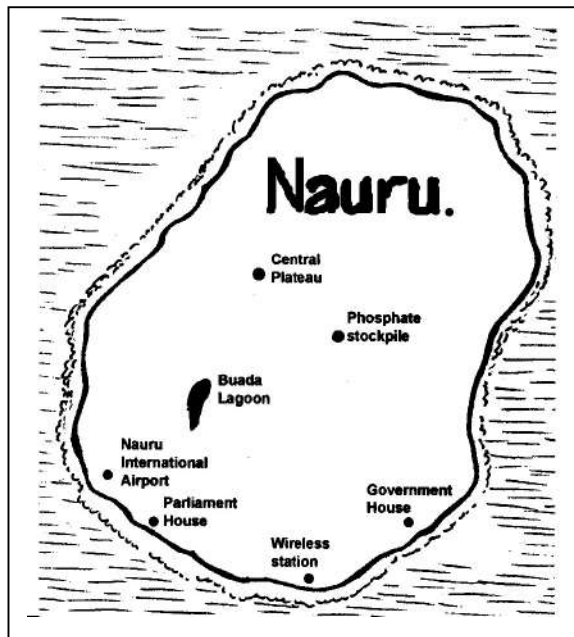
Acute 35°

d.

Obtuse 125°

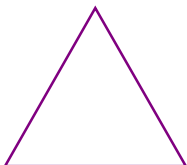
5. Study the map of Nauru on the right. Imagine that you are standing at the Buada Lagoon and answer the following questions.

- At what bearing is the Central Plateau?
- At what bearing is Government House?
- At what bearing is the international airport?
- What can you find at a bearing of 065° ?
- What can you find at a bearing of 205° ?
- What can you find at a bearing of 145° ?

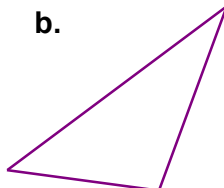


6. Write down the correct name for each of the following triangles. You may measure the angles with a protractor if you need to.

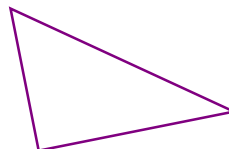
a.



b.



c.

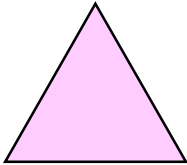
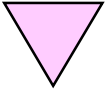
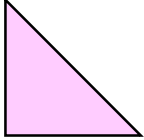
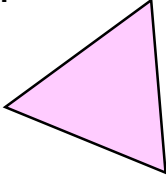


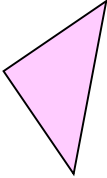
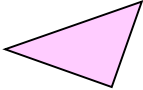
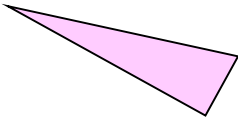
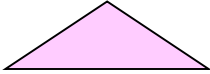
d.

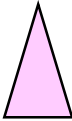

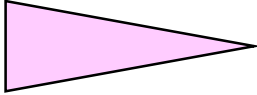
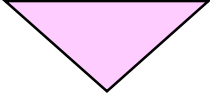


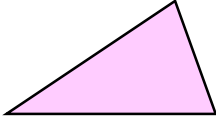
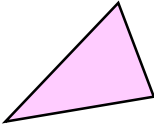
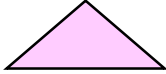
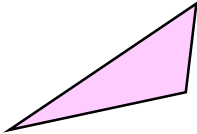
Unit 4 Check Up Page

7. Find the odd one out in each of the following groups of triangles. Explain your choice.

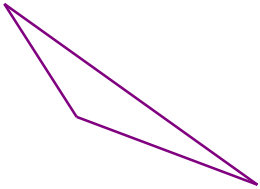

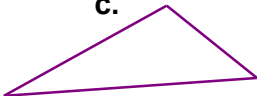
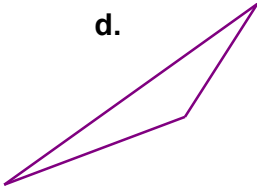
a. A.  B.  C.  D. 

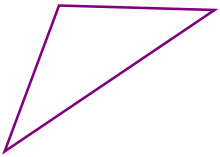

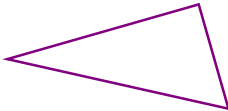

b. A.  B.  C.  D. 

c. A.  B.  C.  D. 

d. A.  B.  C.  D. 

8. Which pairs of triangles are congruent to each other? Write the letters of each pair in your exercise book.

a.  b.  c.  d. 

e.  f.  g.  h. 

9. Construct the following triangles accurately using a ruler and protractor.

Label your diagrams.

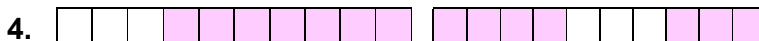
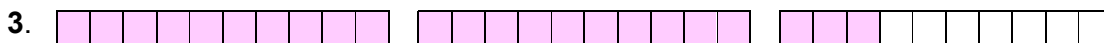
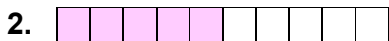
- a.** A scalene triangle ABC in which $AB = 7$ cm $\angle CAB = 40^\circ$ and $CA = 4$ cm.
- b.** An isosceles triangle DEF with a base of 6 cm and base angles of 55°
- c.** An equilateral triangle with sides of 8 cm.
- d.** A right-angled triangle with the two rays of the right angle measuring 4 cm and 8 cm. Write in the size of the other two angles.

1a

Common Fractions and Decimal Fractions

Activity A

How much of each diagram is shaded? Write your answer both as a common fraction and as a decimal fraction.



Remember

The number on top of a fraction is the **numerator**. The number at the bottom is the **Denominator**.

Write all these as decimal fractions.

5. $3\frac{6}{10}$

6. $\frac{2}{10}$

7. $2\frac{2}{10}$

8. $3\frac{4}{10}$

9. $\frac{6}{10}$

10. $3\frac{5}{10}$

11. $21\frac{1}{10}$

12. $16\frac{3}{10}$

13. $9\frac{2}{10}$

14. $\frac{8}{10}$

15. $5\frac{9}{10}$

16. $\frac{7}{10}$

Activity B

Change the following decimal fractions into common fractions.

1. 0.5

2. 0.65

3. 6.4

4. 3.15

5. 12.8

6. 4.22

Change the following to decimal fractions or common fractions.

7. $2\frac{4}{10}$

8. $14\frac{6}{10}$

9. 21.8

10. 26.5

11. 12.38

12. $12\frac{17}{100}$

13. $\frac{8}{100}$

14. $3\frac{3}{10}$

15. $5\frac{4}{100}$

16. 0.1

17. 3.05

18. 0.06

19. $1\frac{19}{100}$

20. 15.99

21. $12\frac{12}{100}$

22. $\frac{51}{100}$

23. $1\frac{8}{10}$

24. 60.01

1b

Using the Division Strategy

Activity A

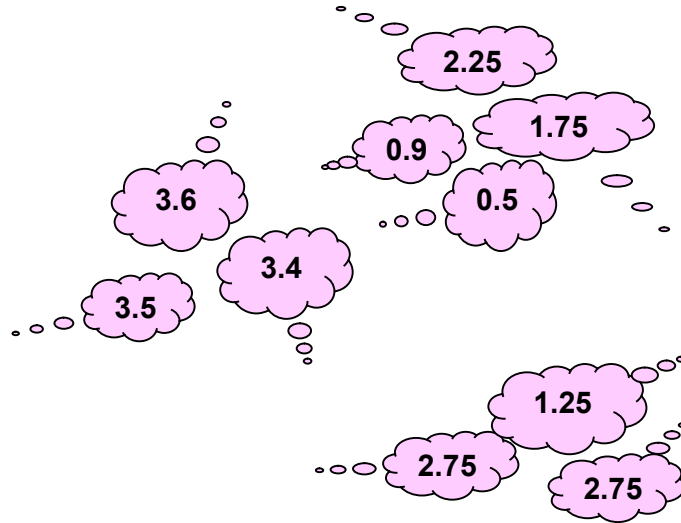
Use the division strategy to change each of these common fractions into decimal fractions.

1. $\frac{3}{5}$
2. $\frac{1}{5}$
3. $\frac{4}{8}$
4. $\frac{2}{8}$
5. $\frac{3}{6}$
6. $\frac{2}{5}$
7. $\frac{8}{20}$
8. $\frac{10}{20}$
9. $\frac{5}{25}$
10. $\frac{6}{8}$

Activity B

Look at the list of common fractions. Can you match them to their correct answer? Write out each correct pair.

1. $3\frac{2}{5}$
2. $2\frac{3}{4}$
3. $1\frac{6}{8}$
4. $\frac{1}{2}$
5. $3\frac{4}{8}$
6. $2\frac{9}{12}$
7. $2\frac{4}{16}$
8. $1\frac{1}{4}$
9. $3\frac{3}{5}$
10. $\frac{18}{20}$



2b Decimal Place Value

Activity A

Draw a decimal place value diagram like this in your exercise book and write the numbers 1 – 12 on the left.

	Th	H	T	O	decimal point	tenths	hundredths
1.			1	0	.	8	
2.							
3.							

Now write each of the following numbers in your chart making sure you place each digit in the correct decimal place.

1. 10.8
2. 4.65
3. 14.26
4. 246.34
5. 90.6
6. 1.08
7. 0.38
8. 20.06
9. 100.93
10. 72.4
11. 101.01
12. 82

Unit 5

Activity B

Arrange the following numbers in sequence, from the largest to the smallest.

1. 1.0 0.5 0.21 4.0 22.5 0.88 8.8 4.20

2. 8.2 7.6 3.9 2.5 6.3 3.5 5.9 9.1

3. 23 32 32.01 23.01 32.11 32.02 23.31 23.11

4. 100 100.01 100.09 100.99 100.19 100.91 100.11 99.99

5. 0.1 100 101.01 10.1 11.11 1.1 0.01 111.01

Activity C

Copy the numbers below into your exercise book and write down the value of the 5 in each number.

1. 65 2. 159 3. 2.5 4. 5,220 5. 12.50

6. 1,542 7. 543.2 8. 0.5 9. 549.35 10. 1.05

3b

Rounding to Whole Numbers

Activity A

Round each decimal fraction to the nearest whole number. Copy and complete the table in your exercise book. An example has been done for you.

	Number	Digit to the right	Is it 5 or more?	Round
Example	2.9	9	yes	up to 3
1.	5.2	2	no	down to?
2.	5.6	6	yes	
3.	3.3			
4.	44.72			
5.	231.22			
6.	0.54			

Activity B

Round each decimal fraction to the nearest whole number.

1. 1.6 2. 3.5 3. 6.2 4. 1.3 5. 2.9
6. 5.3 7. 5.8 8. 0.7 9. 7.4 10. 4.5
11. 11.56 12. 13.42 13. 32.55 14. 24.61 15. 8.62

3c

Rounding to the Nearest Tenth

Activity A

Copy and complete the table on the following page in your exercise book.

Read the table carefully to check whether to round to whole numbers or tenths.

	Number	Round to the nearest	Digit to the right	Is it 5 or more?	Round
1.	2.56	whole number	5	yes	up to
2.	3.34	tenth	4	no	down to
3.	2.41	tenth			
4.	0.15	tenth			
5.	4.02	tenth			
6.	8.21	whole number			
7.	8.21	tenth			
8.	17.57	tenth			
9.	23.60	whole number			
10.	6.66	tenth			

Activity B

1. Round these numbers to the nearest whole number.

a. 4.75 b. 15.09 c. 29.48 d. 49.58 e. 109.8

2. Round these numbers to the nearest tenth.

a. 6.85 b. 8.09 c. 12.99 d. 30.09 e. 40.82

Take Note

Rounding to the nearest tenth is the same as working to one decimal place.

Activity C

Change these common fractions into decimal fractions. Round your answers to the nearest tenth.

Work out each decimal fraction to two decimal places before rounding it to the nearest tenth.

1. $\frac{5}{9}$

2. $\frac{5}{7}$

3. $\frac{2}{3}$

4. $\frac{3}{7}$

5. $\frac{8}{9}$

4a

Adding Decimals

Activity A

Copy and complete the following in your exercise book.

$$\begin{array}{r} 1. \ 0.5 \\ + 4.5 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \ 4.7 \\ + 2.6 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \ 0.9 \\ + 2.0 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \ 22.5 \\ + 12.5 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \ 413.3 \\ + 123.8 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \ 28.6 \\ + 43.2 \\ \hline \end{array}$$

$$7. \ 6.6 + 1.3 =$$

$$8. \ 99.0 + 0.9 =$$

$$9. \ 1.0 + 9.1 =$$

$$10. \ 104.2 + 24.6 =$$

$$11. \ 27.98 + 0.07 =$$

$$12. \ 156 + 23.92 =$$

Remember!

Write all the digits are in their correct place value or you'll get the wrong answer!



Activity B

Work out the answers to these additions.

$$\begin{array}{r} 1. \ 35.65 \\ + 5.36 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \ 8.23 \\ + 2.44 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \ 43.67 \\ + 6.36 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \ 23.45 \\ + 23.45 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \ 5.77 \\ + 7.55 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \ 100.45 \\ + 200.45 \\ \hline \end{array}$$

$$7. \ 4.56 + 11.43 =$$

$$8. \ 0.99 + 9.01 =$$

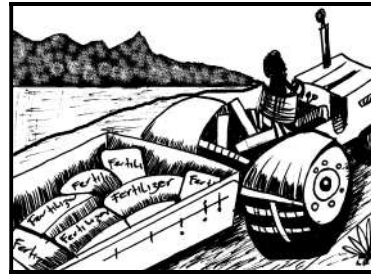
$$9. \ 23.99 + 2.90 =$$

$$10. \ 44.4 + 61.0 =$$

Activity C

Solve these problems. Show all your working out in your exercise book.

- The tractor took 10.5 tonnes of fertilizer in its first load and 8.7 tonnes in the second load. How much fertilizer was transported altogether?
- If I saved \$2.50 on Monday, \$2.05 on Wednesday and 90 cents on Friday, how much did I save altogether?



- I wanted to make some curtains for my house. All the windows were different sizes. After measuring them I worked out that I needed 5.25 metres for the large window, 4.50 metres for my bedroom window and another 3.75 metres for my children's room. How much material did I need to buy altogether?



- Anita walked 2.4 kilometres to the waterfall. Then she walked 1.7 kilometres to the lookout. How far did she walk altogether?

- Patricia went shopping on Saturday. She bought 2.5 kg of flour, 500 g of powdered milk, 250 g of sugar and 3 tins of Taiyo each weighing 0.185 kg. How much did her shopping weigh altogether? Write your answer in kilograms.
- Joe walked 8.23 kilometres to the river mouth. On his return, he took a short cut over the mountain which was 5.3 kilometres. How far did he walk altogether?

4b

Subtracting Decimals

Activity A

Set these sums out in your exercise book and calculate the answers.

- | | | | | | |
|--|--|--|--|--|---|
| 1. $\begin{array}{r} 3.6 \\ - 1.4 \\ \hline \end{array}$ | 2. $\begin{array}{r} 4.7 \\ - 3.8 \\ \hline \end{array}$ | 3. $\begin{array}{r} 7.7 \\ - 0.3 \\ \hline \end{array}$ | 4. $\begin{array}{r} 6.3 \\ - 0.4 \\ \hline \end{array}$ | 5. $\begin{array}{r} 7.3 \\ - 2.3 \\ \hline \end{array}$ | 6. $\begin{array}{r} 46.2 \\ - 0.1 \\ \hline \end{array}$ |
| 7. $54.2 - 14.3 =$ | 10. $48.6 - 7.0 =$ | | | | |
| 8. $16.0 - 7.6 =$ | 11. $37.2 - 26.7 =$ | | | | |
| 9. $17.0 - 4.6 =$ | 12. $256.4 - 17.2 =$ | | | | |



Remember

Always start your calculations from the right.

Activity B

Work out these answers carefully in your exercise book.

- | | | | | | |
|--|--|--|--|--|---|
| 1. $\begin{array}{r} 3.62 \\ - 1.41 \\ \hline \end{array}$ | 2. $\begin{array}{r} 4.74 \\ - 3.86 \\ \hline \end{array}$ | 3. $\begin{array}{r} 7.72 \\ - 0.35 \\ \hline \end{array}$ | 4. $\begin{array}{r} 6.35 \\ - 0.47 \\ \hline \end{array}$ | 5. $\begin{array}{r} 7.34 \\ - 2.36 \\ \hline \end{array}$ | 6. $\begin{array}{r} 46.23 \\ - 0.17 \\ \hline \end{array}$ |
| 7. $54.27 - 14.35 =$ | 8. $16.04 - 7.60 =$ | 9. $17.03 - 4.62 =$ | | | |
| 10. $48.66 - 7.08 =$ | 11. $37.24 - 26.79 =$ | 12. $256.49 - 17.25 =$ | | | |

Activity C

Read these problems carefully. Think about what you have to find out. Set out your sums in your exercise book. Show your working out and your answers.



- When loaded with sacks of potatoes, Mojon's market truck had a mass of 15.5 tonnes.

After the potatoes were unloaded, the truck had a mass of 9.3 t. What was the mass of the potatoes?



Tip

Always put a unit with your answer if there is one!

Unit 5

- Patrick and Jenny of Biti village attended the Solomon Games in 2004. Patrick jumped 8 m 34 cm and Jenny jumped 6 m 44 cm. How much further in metres did Patrick jump than Jenny?
- At the regional sports day, Tania jumped 3 m 91 cm in the long jump and won first place. The second place went to Marion. She jumped 3.25 metres. What was the difference between the jumps?



4C

Adding and Subtracting Decimals

Activity A

Set out these sums in your exercise book. Work out the answers.

1. $23.8 + 24.3 - 10.4 =$

2. $45.3 - 23.4 + 112.2 =$

3. $53.3 + 42.34 - 7.4 =$

4. $11.14 + 11.11 - 11.12 =$

5. $451 + 2.41 - 8.0 =$ 6. $7.7 - 2.5 + 4.3 =$

$$\begin{array}{r} 7. \quad 2.45 \\ 1.00 \\ 3.75 \\ + 16.16 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 34.50 \\ 21.40 \\ 6.62 \\ + 7.80 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 24.5 \\ - 14 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 334.50 \\ - 6.62 \\ \hline \end{array}$$

Watch Out!
There may be more than one step!



Activity B

- Melissa wanted to buy 24.63 metres of blue material. Jango Fashion only had 16.38 metres in stock. How much more material did she need?
- Jackson went on three journeys. The total distance he travelled was 31.55 km. The first journey was the longest, at 11.55 km, and the second journey was 9.5 km. How long was Jackson's last journey?
- The plantation needed to smoke 35 tonnes of copra. They had 15.25 tonnes in the copra shed already and 7.6 tonnes ready to transport to the shed. How much more copra did they need to smoke?
- If I earned \$25 each week for four weeks. Would I have enough money to buy a T-shirt which cost \$12.50, a pair of shorts for \$23.80 and a towel for \$34.25? Would I have any money left over?

Remember
Show all your working out.





5. My water tank holds 750 L when it is full. After a heavy storm it was half full. We used half of that in the next week. How many litres are needed to fill it up again?

5a Multiplying Decimals

Activity A

Copy and complete these multiplications in your exercise book.

- | | | | | |
|---|---|---|---|---|
| 1. $\begin{array}{r} 2.1 \\ \times 2 \\ \hline \end{array}$ | 2. $\begin{array}{r} 4.2 \\ \times 1 \\ \hline \end{array}$ | 3. $\begin{array}{r} 1.2 \\ \times 4 \\ \hline \end{array}$ | 4. $\begin{array}{r} 2.3 \\ \times 3 \\ \hline \end{array}$ | 5. $\begin{array}{r} 1.9 \\ \times 0 \\ \hline \end{array}$ |
| 6. $\begin{array}{r} 2.2 \\ \times 4 \\ \hline \end{array}$ | 7. $\begin{array}{r} 5.1 \\ \times 4 \\ \hline \end{array}$ | 8. $\begin{array}{r} 1.2 \\ \times 3 \\ \hline \end{array}$ | 9. $\begin{array}{r} 4.0 \\ \times 5 \\ \hline \end{array}$ | 10. $\begin{array}{r} 12.1 \\ \times 3 \\ \hline \end{array}$ |



Reminder

Don't forget the decimal point.

Activity B

Set out these multiplications and work out the answers.

- | | | | |
|----------------------|-----------------------|-----------------------|------------------------|
| 1. $12.5 \times 8 =$ | 2. $14.7 \times 6 =$ | 3. $29.9 \times 9 =$ | 4. $36.3 \times 7 =$ |
| 5. $17.5 \times 5 =$ | 6. $30.4 \times 4 =$ | 7. $19.7 \times 7 =$ | 8. $40.8 \times 9 =$ |
| 9. $45.6 \times 8 =$ | 10. $28.8 \times 7 =$ | 11. $30.9 \times 3 =$ | 12. $27.8 \times 10 =$ |

5b Extending Decimal Multiplication

Activity A

Copy and calculate these multiplications in your exercise book.

- | | | | | | |
|--|--|--|--|--|--|
| 1. $\begin{array}{r} 9.16 \\ \times 2 \\ \hline \end{array}$ | 2. $\begin{array}{r} 4.15 \\ \times 3 \\ \hline \end{array}$ | 3. $\begin{array}{r} 7.14 \\ \times 4 \\ \hline \end{array}$ | 4. $\begin{array}{r} 2.13 \\ \times 5 \\ \hline \end{array}$ | 5. $\begin{array}{r} 1.19 \\ \times 6 \\ \hline \end{array}$ | 6. $\begin{array}{r} 8.18 \\ \times 6 \\ \hline \end{array}$ |
| 7. $\begin{array}{r} 5.12 \\ \times 9 \\ \hline \end{array}$ | 8. $\begin{array}{r} 5.17 \\ \times 6 \\ \hline \end{array}$ | 9. $\begin{array}{r} 4.14 \\ \times 5 \\ \hline \end{array}$ | 10. $\begin{array}{r} 12.16 \\ \times 7 \\ \hline \end{array}$ | 11. $\begin{array}{r} 23.24 \\ \times 8 \\ \hline \end{array}$ | 12. $\begin{array}{r} 54.19 \\ \times 0 \\ \hline \end{array}$ |

Unit 5

Activity B

Set these multiplications out carefully and work out the answers.

$$\begin{array}{r} 1. \ 6.2 \\ \times 14 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \ 16.3 \\ \times 15 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \ 25.8 \\ \times 13 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \ 15.2 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \ 12.2 \\ \times 15 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \ 25.5 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \ 12.6 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \ 11.4 \\ \times 16 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \ 7.7 \\ \times 20 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \ 32.2 \\ \times 17 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \ 29.12 \\ \times 22 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \ 32.61 \\ \times 24 \\ \hline \end{array}$$

Activity C

Solve these problems. Show all the working out in your exercise book.

1. If one pumpkin weighed 2.65 kg how much would 14 of the same size weigh?
2. If each exercise book cost \$13.30 how much would 25 cost?
3. If one water tank could hold 254.5 L of water what would 15 tanks hold?
4. If each cake needs 750 g of flour how many kilograms would I need to make 22 cakes?
5. If we placed 17 bamboo poles each measuring 3.75 m end to end, how far would they reach?

6b

Division and Decimals

Activity A

Copy and calculate these divisions. Keep dividing until you have an answer with no remainder. All your answers will include one or more decimal places.

$$1. \ 5 \overline{) 172} \quad 2. \ 5 \overline{) 149} \quad 3. \ 4 \overline{) 194}$$

$$4. \ 6 \overline{) 447} \quad 5. \ 8 \overline{) 462} \quad 6. \ 4 \overline{) 125}$$

$$7. \ 8 \overline{) 3,676} \quad 8. \ 5 \overline{) 8,254} \quad 9. \ 6 \overline{) 5,283} \quad 10. \ 4 \overline{) 21,881} \quad 11. \ 8 \overline{) 1,858}$$

$$12. \ 8 \overline{) 75,710} \quad 13. \ 5 \overline{) 27,354} \quad 14. \ 6 \overline{) 39,045} \quad 15. \ 5 \overline{) 26,133} \quad 16. \ 8 \overline{) 670}$$

Reminder

Remember there is a decimal point in each answer!



Activity B

Calculate these divisions to one decimal place. Remember you must work to two places of decimals and then round your answer.

1. $3 \overline{)28}$ 2. $4 \overline{)55}$ 3. $6 \overline{)49}$ 4. $7 \overline{)71}$ 5. $9 \overline{)62}$ 6. $3 \overline{)85}$
7. $6 \overline{)123}$ 8. $9 \overline{)321}$ 9. $3 \overline{)272}$ 10. $7 \overline{)452}$ 11. $3 \overline{)662}$
12. $6 \overline{)4000}$ 13. $7 \overline{)1403}$ 14. $3 \overline{)9043}$ 15. $9 \overline{)1111}$ 16. $7 \overline{)3670}$

Activity C

Andrew is a taxi driver. He keeps a record of how many kilometres he drives each week and of how much he spends on petrol too.

Here is his travel record for 5 weeks. Study the information before answering the questions below.

Week 1	Distance	576 km	Fuel Costs	\$571.75
Week 2	Distance	349 km	Fuel Costs	\$363.50
Week 3	Distance	134 km	Fuel Costs	\$229.00
Week 4	Distance	471 km	Fuel Costs	\$466.30
Week 5	Distance	497 km	Fuel Costs	\$516.45

Plan how you are going to work out the answers. Set out all your calculations clearly and show all your working.

1. What was the total distance Andrew covered in 5 weeks?
2. What was his average distance per week?
3. What was his average weekly expenditure on petrol?

7c Working with Money



Activity A

Alison went to ACOR to get some stationery for her office. When she arrived she was confused by how the goods were priced.

Study ACOR's price list on the right before completing the activities on the next page.



ACOR Price List			
Manila folders	245 cents for a pack of two	Biro	2,630 cents a pack
Stapler	2,980 cents each	Ruler	105 cents each
Clear file	3,280 cents each	Hole punch	4,900 cents each
Writing pad	1,840 cents each	White board marker	1,290 cents each

Unit 5

1. Help Alison by rewriting the ACOR price list in dollars and cents in your exercise book.
2. Calculate how many dollars and cents Alison needs to buy all the stationery on her shopping list.



Shopping List

7 Writing pads
4 White board markers
7 Clear files
7 Rulers
2 Packs - Biro
1 Hole punch
50 Manila folders
2 Staplers

Activity B

Copy the tables into your exercise book and fill in all the spaces.

	Dollars	Cents
a.	\$2.50	250c
b.		435c
c.	\$570.40	
d.	\$37.01	
e.		25c
f.		1730c

	Dollars	Cents
g.	\$90	
h.		1,705c
i.		3,500c
j.	\$101.10	
k.	\$3,000	
l.		63,550c

Activity C

Solve these problems in your exercise book. Show all your working out.

1. Before joining an exercise programme, Timothy weighed 82.4 kg. If he lost 8.25 kg, how much did he weigh after the programme?
2. Four pupils recorded their heights: 1.2 m, 1.7 m, 1.19 m and 1.38 m. What is their combined height?
3. The shelf needs to be 3.62 m long. The timber that Joando bought is 4.25m long. How much will she need to saw off the board to make the shelf?
4. The pupils had collected \$75.75 to get the materials for making shelves in their classroom. The timber cost \$46.88. How much did they have left to buy screws and brackets to put up the shelves?
5. If sausages sell for \$4.98 a kilogram, how much would it cost if I bought 3 kg of sausages?

Tip

Always put the correct units with your answer.








Check Up Page

1. Use $<$ or $>$ to make the following true.

- a. $0.2 \underline{\hspace{1cm}} 0.8$ b. $0.9 \underline{\hspace{1cm}} 1.2$ c. $1.7 \underline{\hspace{1cm}} 1.5$ d. $1.1 \underline{\hspace{1cm}} 1.5$
 e. $0.10 \underline{\hspace{1cm}} 1.99$ f. $0.23 \underline{\hspace{1cm}} 1.5$ g. $0.3 \underline{\hspace{1cm}} 0.75$ h. $1.9 \underline{\hspace{1cm}} 1.09$

2. Copy and change the following to decimal fractions.

- a. 2  b. 12  c. 3  d.  e.
 1 

Copy and change the following to common fractions.

- f. 5.5 g. 4.1 h. 3.25 i. 10.75 j. 0.4

3. Copy the numbers below into your exercise book. Write the value of the 3 in each number.

- a. 63 b. 153 c. 2.3 d. 23,206 e. 12.30
 f. 1,342 g. 8,432.7 h. 0.3 i. 849.53 j. 1.03
 k. 423.79 l. 24.93

4. Round these numbers to the nearest whole number.

- a. 1.3 b. 21.56 c. 17.05
 d. 19.82 e. 109.9 f. 99.49

Round these numbers to the nearest tenth.

- g. 4.82 h. 2.67 i. 53.05
 j. 43.96 k. 29.08 l. 39.99

5. Copy and calculate the answers to the following.

- a.
$$\begin{array}{r} 25.35 \\ +15.39 \\ \hline \end{array}$$
 b.
$$\begin{array}{r} 7.25 \\ + 3.33 \\ \hline \end{array}$$
 c.
$$\begin{array}{r} 3.32 \\ - 1.50 \\ \hline \end{array}$$
 d.
$$\begin{array}{r} 6.72 \\ - 2.86 \\ \hline \end{array}$$

 e.
$$\begin{array}{r} 1.72 \\ \times 7 \\ \hline \end{array}$$
 f.
$$\begin{array}{r} 12.52 \\ \times 5 \\ \hline \end{array}$$
 g.
$$\begin{array}{r} \\ 4 \overline{) 466} \end{array}$$
 h.
$$\begin{array}{r} \\ 2 \overline{) 385} \end{array}$$

Unit 5 Check Up Page

- 6a. Adrian's packed case weighed 21.9 kg. To reduce the weight Adrian removed a pair of boots weighing 1.8 kg and a plastic bag of wet clothes weighing 1.2 kg. Work out the new weight of the case.
- 6b. Tony calculated that they collected 425 cans along 10 kilometres of road. About how many cans was that per kilometre?
7. Copy each statement into your exercise book and complete it by filling in the gaps.
- | | | |
|--------------------|------------------------|----------------------|
| a. 350 cm = ___ m | b. 7.5 m = ___ cm | c. 2,500 mL = ___ L |
| d. 3.75 L = ___ mL | e. \$10.50 = ___ cents | f. 395 cents = \$___ |
| g. 83.5 kg = ___ g | h. 1,359 g = ___ kg | |



Nguzu Nguzu Mathematics

Standard 6

