Mathematics Class 5

Term 2



Pupil's Book

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Please do not write in this book. Write the answers in your exercise book.

UNIT 11: TRIANGLES

Lesson 1: Review of Angles

Group Work

Work together to name these angles.

Each of you will then describe the angles to the rest of the class.



Individual Application

Answer these questions.

- 1. What is the angle that measures exactly 90°?
- 2. Name the angle that is less than 90°.
- 3. Draw an angle that measures 180°.
- 4. Explain the obtuse angle.

Additional Exercise

Name the following angles.



Right Angles Lesson 2:

Group Work

Draw and cut out a right-angled triangle. Stick it onto the chart.

Individual Application Which of the following triangles are right-angled triangles?



Additional Exercise

1.

How many right angles can you see in these shapes?





Lesson 3: Equilateral Triangles

Group Work

Using a ruler, draw an equilateral triangle. Using a protractor, check that the three angles are each 60°. Present and display your work.

Individual Application

Write "True" or "False"

- 1. An equilateral triangle has three equal sides.
- 2. The three angles of an equilateral triangle are also equal.
- 3. An equilateral triangle has only two angles that are equal.
- 4. An equilateral triangle has only two sides that are equal.
- 5. Each of the three angles of an equilateral triangle measures 60°.

Additional Exercise

Draw an equilateral triangle.

Lesson 4: Experiment on Angles of a Triangle

Group Work

In your group, draw and cut out any triangle. Tear off the angles and place them as shown below.



Х

Why do the angles make a straight angle when placed together like this?

Individual Application

By adding the two given angles, then subtracting the sum from 180°, find the size of the third angle of these triangles.





Additional Exercise

2.

3.

4.

Could the following be the angles of a triangle? Write Yes or No.

- 1.
 40°, 60°, 90°
 6.
 45°, 55°, 90°
 - 45°, 45°, 90° 7. 45°, 113°, 20°
 - 8. 35°, 55°, 90°
 - 9. 36°, 77°, 65
- 5. 50°, 80°, 40° 10. 50°, 100, 30

Lesson 5: Assessment

30°, 60°, 90°

65°, 60°, 90°

Group Work

Working in your group, draw the following :

- a right angle
- a right-angled triangle
- an equilateral triangle

Individual Application

- 1. Answer these questions.
- a) What is the name of the angle that measures 90°?
- b) Descripe an obtuse and an acute angle.
- c) How many vertices has
 - (i) a right-angled triangle?
 - (ii) an equilateral triangle?
- d) How many sides has a right-angled triangle?

2. Work out the missing angle.



UNIT 12: **DECIMAL FRACTIONS**

Lesson 1: One and Two Decimal Places

Group Work

Do the working out for Numbers 1 to 5 together. Then each of you write the answers in your exercise book, showing the working out.

1.	$\frac{2}{5}$	4.	$\frac{3}{4}$
2.	$\frac{1}{10}$	5.	$\frac{1}{4}$
3.	$\frac{3}{5}$		

Individual Application Write True or False.

1.	$\frac{1}{2} = 0.5$	6.	$\frac{4}{9} = 0.44$
2.	$\frac{3}{4} = 0.75$	7.	$\frac{3}{10} = 0.3$
3.	$\frac{4}{5} = 0.9$	8.	$\frac{2}{7} = 0.27$
4.	$\frac{2}{3} = 0.43$	9.	$\frac{1}{5} = 0.2$
5.	$\frac{6}{7}$ = 0.85	10.	$\frac{7}{10} = 0.7$

Additional Exercise

Change these fractions into decimals, to one decimal place.

1.	$\frac{2}{5}$	4.	$\frac{3}{5}$
2.	$\frac{1}{5}$	5.	$\frac{5}{10}$
3.	$\frac{7}{10}$		

Change these fractions into decimals, to two decimal places.

1.	$\frac{3}{4}$	4.	$\frac{1}{20}$
2.	$\frac{6}{8}$	5.	$\frac{5}{20}$
3.	$\frac{1}{4}$		

Lesson 2 : Addition/Subtraction of Numbers with One or Two Decimal Places

Individual Application

1. Complete these tables.

+	0.8	0.11	-	3.6	3.7
4.21	5.01		4.8		
5.3			4.7		
7.04					

- 2. a) What is the difference between 56.24 and 39.29?
 - b) Mum had \$20.85. She gave her son \$5.35. How much did she have left?
 - c) During a class fund raising, Baiki contributed \$1.50. Meei contributed \$2.60. Tioti contributed \$4.15. How much money was there altogether?

Additional Exercise

Work out the sum or difference for the following.

1.	1.3 <u>+ 2.9</u>	6.	9.83 <u>- 6.42</u>
2.	0.2 <u>+ 8.4</u>	7.	2.4 <u>- 1.4</u>
3.	6.4 <u>+ 2.9</u>	8.	6.3 <u>- 5.2</u>
4.	7.25 <u>+ 0.05</u>	9.	4.13 <u>- 2.45</u>
5.	1.08 + 4.95	10.	8.52 - 6.94

Lesson 3: Multiplication and Division of Numbers with One and Two Decimal Places

Group Work

Work together to calculate the product or quotient on a chart.

- 1. $12.5 \div 5 =$ 4. $0.52 \times 6 =$
 - $8.4 \div 4 = 5.$ 17.3 x 0.2 =
- 3. $7.2 \div 3 =$ 6. $0.7 \times 12 =$

Individual Application

2.

A. Work out the product. B. Calculate the quotient.

1.

2.

3.

4.

 $25.5 \div 5 =$

 $17.6 \div 8 =$

52.2 ÷ 9 =

 $12.67 \div 7 =$

- 1. 1.3 x 7 =
- 2. 9.12 x 5 =
- 3. 0.43 x 0.2 =
- 4. 365 x 0.3 =
- 5. $1.45 \times 0.4 =$ 5. $7.2 \div 3 =$

Additional Application

Answer these questions.

- 1. Andrew earns \$8.40 per hour. How much will he earn after working 8 hours?
- 2. Myrose earns \$7.25 per hour. How much does she earn after working 6 hours?
- 3. \$25.50 is divided equally among 5 girls. How much is there for each girl?
- 4. 4 men wanted an equal share from \$32.00. What would be the share?

Lesson 4 : Multiplication of Numbers with One or Two Decimal Places by 10 and in Expanded Notation

Group Work

Using the rule below, work out the products.

Rule: Move the decimal point one place to the right

- 1. 0.65 x 10 =
- 2. 4.86 x 10 =
- 3. 82.14 x 10 =

By using expanded notation work out the products.

- 1. 2.63 x 6 =
- 2. 41.72 x 2 =
- 3. 69.14 x 7 =

Individual Application

- A. Using a rule, write the answers to the following.
- 1. 3.5 x 10 = 4. 24.42 x 10 =
- 2. 17.5 x 10 = 5. 5.61 x 10 =
- 3. 0.68 x 10 =
- B. Example:

<u>36.54 x 5</u>	
	30 x 5 = 150
	$6 \times 5 = 30$
	.50 x 5 = 2.50
	.04 x 5 = <u>0.20</u>
	182.70

Use the method above to work out the following.

- 1. 25.13 x 4 = 4. 7.06 x 9 =
- 2. 18.55 x 6 = 5. 11.64 x 5 =
- 3. 9.41 x 3 =

Additional Exercise

Do these:

- 1. 7.85 x 10 = 4. 25.63 x 4 =
- 2. 0.03 x 10 =
- 5. 2.85 x 2 =
- 3. 3.24 x 10 =

Lesson 5 : Assessment

Group Work

In your group, work out on a chart the products of the following using expanded notation.

1.	73.50 x 4 =	4. 12.74 x 2 =
_		

- 2. 18.06 x 5 = 5. 8.13 x 10 =
- 3. 40.69 x 8 =

Individual Application

A. Write these fractions as decimals.

1.	$\frac{4}{5}$	2.	$\frac{7}{8}$

- B. Do these.
- 1. 23.5 5. 14.9 + 7.9 <u>x 8</u>
- 2. 43.45 6. 39.42 + 9.07 <u>x 9</u>
- 4. 21.15 8. 72.64 - <u>19.67</u> ÷ 8

- C. Answer these questions.
- 1. One bar of soap costs \$1.95. How much do 5 bars cost?
- 2. A piece of material 72.5 metres long is cut into 5 equal shares. How long is one share?
- Tawaia contributed \$2.55 to a class fund raising. Bwau contributed \$1.30. How much money did they give altogether?
- 4. Timeon had \$25.70 in his purse. He bought a packet of cigarettes for \$2.50. How much did he have left?

UNIT 13: PERIMETERS

Lesson 1: The Perimeter of a Rectangle

Group Work

Discuss and calculate the perimeter of these rectangles, using the two methods you have just learnt.



Calculate the perimeters.









Lesson 2: The Perimeter of a Square

Group Work

Calculate the perimeter of these squares using both methods.



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Present your work and display your chart.

Calculate the perimeters of the following using both methods.





Additional Exercise

Draw any two squares and calculate the perimeter.



Group Work

Work together to calculate the perimeters.



Display group work.

Calculate the perimeters of these triangles.



Additional Exercise

Draw any three triangles and calculate their perimeters.

Lesson 4: Calculating the Circumference of a Circle or Cylinder by Rolling

Group Work

Work together to find the circumference of a tin by rolling. Roll the tin and measure the rolling distance. Report your findings.

Individual Application

Measure the circumferences of five objects using a piece of string and a ruler.

Additional Exercise

Calculate the circumference of a coin and a cylinder by rolling.

Lesson 5: Assessment

Group Work

Draw and calculate the perimeters of these shapes on a chart.

- 1. a square
- a triangle
 an equilateral triangle
- 2. a rectangle4. an equilateral triangle

Individual Application

Calculate the perimeters of these shapes.



5. Calculate the circumference of a mackerel tin by rolling.

UNIT 14: FRACTIONS AND DECIMALS

Lesson 1: Converting Fractions to Decimals Using One Decimal Place

Group Work

Say the Easy Rule together three times. Then convert these fractions into decimals on a chart.

1.	$\frac{3}{5}$	4.	$\frac{2}{5}$
2.	$\frac{7}{10}$	5.	$\frac{4}{5}$
3.	$\frac{3}{10}$		

Report to the class and display your work.

Individual Application

Convert these fractions to decimals.

1.	$\frac{6}{10}$ =	4.	$\frac{3}{10}$ =
2.	$\frac{2}{10}$ =	5.	$\frac{7}{10}$ =
-	0		

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

Additional Exercise

Write these fractions as decimals.

1.	$\frac{1}{10}$	4.	$\frac{9}{10}$
2.	$\frac{4}{10}$	5.	$\frac{2}{10}$
3.	$\frac{5}{10}$		

Lesson 2: Converting Decimals to Fractions Using One Decimal Place

Group Work

Convert these decimals to fractions.

1.	0.2	3.	0.1	5.	0.9
2.	0.5	4.	0.6		

Write True or False beside each answer.

1.	$0.5 = \frac{5}{1}$	4.	$0.2 = \frac{1}{2}$
2.	$0.4 = \frac{4}{10}$ or $\frac{2}{5}$	5.	$0.6 = \frac{6}{1}$
3.	$0.7 = \frac{7}{10}$		

Additional Exercise

Write the following decimals as fractions.

1.	0.5	4.	0.9
2.	0.6	5.	0.1
3.	0.8		

Lesson 3: Converting Decimals to Fractions using Two Decimal Places

Group Work

Convert these decimals into fractions on a sheet of paper.

1.	0.25 =	4.	0.15 =

- 2. 0.10 = 5. 0.45 =
- 3. 0.75 =

Report on your work.

Individual Application

Convert these decimals to fractions.

- 1. 0.22 = 4. 0.72 =
- 2. 0.12 = 5. 0.20 =
- 3. 0.62 =

Additional Exercise

Circle the best answer.

- 1. 0.15 is equal to
- a) $\frac{3}{20}$ b) $\frac{5}{1}$ c) $\frac{5}{10}$ d) $\frac{5}{100}$

2.	0.25 is	the sa	ame as				
a)	$\frac{1}{4}$	b)	$\frac{25}{100}$	c)	$\frac{25}{10}$	d)	$\frac{25}{1}$
3.	0.20 is	equal	to				
a)	$\frac{1}{2}$	b)	$\frac{1}{5}$	c)	$\frac{1}{3}$	d)	$\frac{1}{10}$
4.	0.75 is 1	the sa	ame as				
a)	$\frac{1}{4}$	b)	$\frac{2}{4}$	c)	$\frac{3}{4}$	d)	whole number
5.	0.35 is	equal	to				
a)	$\frac{1}{3}$	b)	$\frac{3}{10}$	c)	$\frac{3}{1}$	d)	$\frac{7}{20}$

Lesson 4: Converting Fractions to Decimals Using Two or More Decimal Places

Group Work

Work together to convert the following fractions into decimals.

1. $\frac{2}{8}$ 2. $\frac{3}{5} =$ 3. $\frac{5}{8} =$ 4. $\frac{3}{8} =$ 5. $\frac{12}{15} =$

Individual Application

Convert these fractions to decimals. Show your working out.

1. $\frac{7}{8}$ 2. $\frac{7}{25}$ 3. $\frac{3}{12}$ 4. $\frac{1}{4}$ 5. $\frac{6}{8}$

Additional Exercise

Write these fractions as decimals.

1.	$\frac{1}{8}$	4.	$\frac{4}{25}$
2.	$\frac{3}{4}$	5.	$\frac{3}{8}$
3.	$\frac{5}{8}$		

Lesson 5: Assessment

Group Work

Discuss with your friends and agree whether to write 'True' or 'False'.

- 1. $\frac{5}{10}$ is equal to $\frac{1}{2}$
- 2. $\frac{1}{2}$ is equal to 0.5
- 3. $\frac{4}{5}$ is 0.85 in decimal
- 4. 0.75 is $\frac{75}{10}$ in fraction
- 5. One decimal place after the point refers to a number over 100.

Individual Application

A. Convert these fractions to decimals to three decimal places

1.	$\frac{1}{8}$	6.	$\frac{8}{9}$
2.	$\frac{1}{2}$	7.	$\frac{6}{10}$
3.	$\frac{3}{4}$	8.	$\frac{2}{7}$
4.	$\frac{1}{4}$	9.	$\frac{2}{3}$
5.	$\frac{5}{6}$	10.	$\frac{5}{8}$
В.	Convert these decimals	to fractions.	
1.	0.08	6.	0.9
~			
2.	0.25	7.	0.725
2. 3.	0.25 0.02	7. 8.	0.725 0.125
2. 3. 4.	0.25 0.02 0.1	7. 8. 9.	0.725 0.125 0.6

- C. Circle the best answer.
- 1. To convert fractions to decimals we have to
- a) divide the denominator by the denominator.
- b) divide the denominator by the numerator.
- c) divide the numerator by the denominator.
- d) divide the numerator by the numerator.
- 2. The fraction $\frac{5}{8}$ is equal to the decimal ____.
- a) 0.65
- b) 0.625
- c) 0.6
- d) 0.652
- 3. 0.06 is the same as
- a) $\frac{6}{10}$
- b) $\frac{6}{1}$
- **C)** $\frac{6}{100}$
- d) $\frac{6}{1000}$
- 4. $\frac{4}{5}$ is equal to the decimal _____.
- a) 0.08
- b) 0.8
- c) 0.80
- d) 0.008
- 5. 0.2 is the same as the fraction _____.
- a) .2
- b) $\frac{2}{1}$
- **c)** $\frac{2}{100}$
- d) $\frac{2}{10}$ or $\frac{1}{5}$

UNIT 15: CIRCLES

Lesson 1: Parts of a Circle (Radius, Diameter, Centre)

Group Work

Working together, draw three circles on the chart. Mark a centre in the first circle, a radius in the second circle and a diameter in the third circle. Present and display your work.

Additional Exercise

Circle the correct word.



Lesson 2: Parts of a Circle (Circumference, Arc and Chord)

Group Work

Work in your group. Draw three circles.

Mark an arc on one circle, the circumference on the next and a chord on the third.

Present your work. Display your chart.

Match the names with the pictures.



Additional Exercise

Draw circles and mark the following parts.

1.	arc	4.	radius
2.	circumference	5.	diameter
3.	chord	6.	centre

Lesson 3: Parts of a Circle (Semicircle, Sector, Segment)

Group Work

Draw three circles and mark or label the three parts (sector, segment, semicircle) on a chart.

Choose a reporter to present your group's work. Display your chart.

Match the pictures with the names.



Additional Exercise

Draw the following parts of a circle.

segment sector semicircle chord arc

Lesson 4: Degrees in a Circle

Group Work

Draw three circles of different sizes, then use a protractor to measure the angle in the centre. Record your answers.

Draw one small and one big circle. Draw lines to form right angles. How many right angles has a small circle? How many right angles has a big circle?



Additional Exercise

Write 'True' or 'False'

- 1. No matter how big a circle is, the angle at the centre stays the same.
- 2. A big circle measures more than 360°.
- 3. The angle at the centre of a small circle measures 360°.
- 4. A circle has 5 right angles.
- 5. All circles, small or big, have a total angle of 360° at the centre.



Group Work

Work together to draw and label these parts of a circle.



A. Label each part of a circle.



- B. Write 'True' or 'False'
- 1. A circle has a total degree of 360°.
- 2. A radius is half of a diameter.
- 3. A chord is also a diameter.
- 4. A semicircle is different from half-circle.
- 5. A circumference is the distance around the circle.

UNIT 16: MEASURING HEIGHT AND WEIGHT IN METRIC MEASUREMENTS

Lesson 1: Measuring Height in Metres (m) and Centimetres (cm)

Group Work

Measure the height of each group member and record the measurement in decimal form using metres.

Choose a reporter to present the group's heights.

Individual Application

Find a partner from another group. Measure the height of your partner. Write the height in decimal form. Submit your work to the teacher.

Additional Exercise

Fill in the gaps.

My height is ____ cm. In metres using decimals, it is ____ m.

My partner's height is ____ cm. In decimal form, it is ____ m.

I am ____ (taller, shorter) than my partner.

Lesson 2: Measuring Length

Group Work

Work together to measure the length of these objects.

blackboard table desk door shelf

Write the measurements in decimal form using metres. Choose a reporter from your group to present the group's work.

Measure the length of these objects.

a cupboard a form

Write your answers in decimal form.

Additional Exercise

Measure the length of the classroom using a metre ruler.

Lesson 3: Measuring Breadth

Group Work

Work together to measure the breadth of : the blackboard a table a desk

Write the measurement in decimal form using metres. Choose a reporter to present the group's work.

Individual Application

Measure the breadth of these objects. a door, a shelf, a cupboard

Write the measurement in decimal form.

Additional Exercise

Measure the breadth of the classroom using a metre ruler.

Lesson 4: Measuring Weight

Group Work

Work in your group. Weigh any three objects using a counter scale. Your teacher will make sure that your group has a turn at using the scale. Record the weights. Present your work.

Using a counter scale, weigh these objects.

an exercise book a coconut a box of chalk

Additional Exercise

Your teacher has prepared this chart and put it up on the wall.

Pupil's Name	Weight in Kg.

Try to visit a clinic/airport to find out your weight. Write the weight on the chart beside your name.

Lesson 5: Assessment

Group Work

Work in your group. Using a centimetre ruler measure these: The length of the table The breadth of the door The height of one group member

Record the measurement in decimal form.
Individual Application

- A. Express these measurements in decimals.
- 1. 1 m. 5 cm. = $_$ m.
- 2. 4 m. 25 cm. = ____ m.
- 3. 3 m. 30 cm. = ____ m.
- 4. 5 m. 55 cm. = ____ m.
- 5. 2 m. 15 cm. = ____ m.
- B. Measure the following using a centimetre ruler.
- 1. the length of your exercise book
- 2. the breadth of your desk
- 3. the height of the teacher's table
- 4. the length of your pencil
- 5. the breadth of a box.

Write the measurement in decimal form.

UNIT 17: MULTIPLYING WHOLE NUMBERS

Lesson 1: Multipying Two Digits by a Single Digit

Group Work

Work together to provide illustrations for these multiplication sums.

18 x 5 11 x 9 13 x 8

Present your work and display it.

Individual Application

Find the product using diagrams.

12 x 7 14 x 4 15 x 3

Additional Exercise

Work out the products.

1.	79 <u>x 5</u>	6.	36 <u>x 4</u>
2.	68 <u>x 7</u>	7.	84 <u>x 6</u>
3.	53 <u>x 6</u>	8.	53 <u>x 3</u>
4.	47 <u>x 9</u>	9.	72 <u>x 8</u>
5.	91 x 8	10.	80 x 5

Lesson 2: Multiplying Two Digits by Two Digits

Group Work

Work together. Using the prescribed method, find the product of:

1.	69 <u>x 24</u>	2	4. 85 <u>x 25</u>	
2.	94 <u>x 55</u>	Ę	5. 95 <u>x 66</u>	
3.	89 <u>x 42</u>			

Individual Application

Do these.

1.	91 <u>x 22</u>	4.	73 <u>x 28</u>
2.	92 <u>x 33</u>	5.	63 <u>x 29</u>
3.	89 <u>x 31</u>		

Additional Exercise

Find the product using a short method.

1.	45 <u>x 38</u>	4.	95 <u>x 37</u>
2.	64 <u>x 33</u>	5.	26 <u>x 15</u>
3.	83		

<u>x 58</u>

Lesson 3: Multiplying Tens by Tens

Group Work

Solve these using the illustration method.

- 12 x 11
- 14 x 10
- 16 x 12

Present and display your work.

Individual Application

Using the illustration method, work out the following:

15 x 12

18 x 14

Additional Exercise

Calculate the product using illustrations.

Lesson 4: Multiplying Two Digit by Tens With Products of 10

Group Work

Using both methods, work together to work out these:

1. 73 $\times 50$ 2. 67 $\times 40$ 3. 52 $\times 60$

Individual Application

Using both methods do these:

1.	95 x 20	4.	95 x 50
~	07 40	_	~ ~ ~

2. 97 x 40 5. 99 x 60

3. 96 x 30

Additional Exercise

Solve these using both methods.

1.	35 x 20	4.	75 x 70
-		_	

- 2. 55 x 60 5. 85 x 80
- 3. 45 x 50

Lesson 5: Assessment

Group Work

In your group, work out the products using illustrations.

1.	17 x 12	2.	19 x 12	3.	18 x 11

Individual Application

Α.	Using the method you prefer, calculate the products.			
1.	27 x 30	4.	57 x 60	
2.	37 x 40	5.	67 x 70	
3.	47 x 50			
В.	Work out the products.			
1.	59 x 9	4.	83 x 8	
2.	69 x 9	5.	62 x 7	
3.	79 x 9			
C.	Find the products.			
1.	34 x 28	4.	25 x 14	
2.	36 x 32	5.	55 x 25	
3.	38 x 14			

UNIT 18: SOLIDS

Lesson 1: Introduction of Parallel Lines, Right Angled Objects, Edges and Vertices

Group Work

Working together, draw the figure and write the names of the following.

- 1. parallel lines
- 2. right-angled object
- 3. edges
- 4. vertices



Choose a member of the group to present and display your work.

Individual Application

Draw a line from the labels to the correct places on the diagram.



Additional Exercise

Write 'True' or 'False'.

- 1. Parallel lines will always meet.
- 2. A vertex is the point where two or more lines meet.
- 3. A right angled object has an angle of 90°.
- 4. Edges are the lines where two faces meet.
- 5. A box of chalk has four vertices.

- 6. A box of chalk has 12 edges.
- 7. A box of chalk has 3 faces.
- 8. A box of chalk has a right angle.

Lesson 2: A Cuboid

Group Work

Draw a cuboid on a chart and label the following.

vertex face edge

Choose a reporter to report on your group's work.

Individual Application

Draw a cuboid and show the following.

vertex face edge

Additional Exercise

Answer these questions:

- 1. How many rectangular faces has a cuboid?
- 2. How many vertices has a cuboid?
- 3. How many edges has a cuboid?
- 4. Is there a right angle in a cuboid?
- 5. Are there parallel lines in a cuboid?

Lesson 3: A Cylinder and a Cone

Group Work

Working in your group, draw a cone and a cylinder on a sheet of paper and write their names.

Individual Application

Draw and write your own description of these two solid shapes:

- 1. a cone
- 2. a cylinder.

Answer these questions.

- 1. How many vertices has a cone?
- 2. How many vertices has a cylinder?
- 3. Is there a right angle in a cone?
- 4. How many faces has a cylinder?

Lesson 4: A Tetrahedron

Group Work

Your teacher will put the net of a tetrahedron on the table where you can see it.

Work together to draw the net, then cut it out.

Fold it and stick it together to form a tetrahedron.

Choose a reporter to present the group's work. Display your tetrahedron.

face

Individual Application

Copy this shape and label the following parts.



edge

Additional Exercise

Answer these questions.

- 1. How many vertices has a tetrahedron?
- 2. How many edges has a tetrahedron?
- 3. How many faces has a tetrahedron?

Lesson 5: Assessment

Group Work

Work together to draw these solids on a chart.

cuboid cylinder cone tetrahedron

- Individual Application A. Look at the pictures of solids and fill in the correct answers.
 - 1. A cuboid has





vertex circular base

4. A cylinder has



B. Match the diagrams and names.



- C. Draw:
 - 1. Two parallel lines.
 - 2. An object with right angles.

UNIT 19: MULTIPLICATION

Lesson 1: Multiplication of Hundreds by Tens

Group Work

Using the method you have learnt, solve the following :

512 x 38 431 x 42 675 x 28 Display your group's work.

Individual Application

Find the products by completing these:



Solve these:

1.	455 x 32
2.	495 x 34
3.	468 x 36
4.	485 x 38
5.	375 x 23

Lesson 2: Multiplication of Hundreds by Whole Numbers that are Multiples of 100

Group Work

Using the prescribed method, work out the products of these:

- 1. 295 x 400
- 2. 385 x 500
- 3. 595 x 700

Individual Application

Calculate the products.

- 1. 475 x 600
- 2. 665 x 800
- 3. 723 x 500
- 4. 628 x 200
- 5. 382 x 700

Use the same procedure to complete the following.



Lesson 3: Solving Multiplication Word Problems

Group Work

Read the problems and discuss how to work out the answers for the following.

- 1. Tawita plants 36 seeds in one row. How many seeds does he plant in 14 rows?
- 2. If a box of matches contains 50 matches, how many matches are there in 12 boxes?
- 3. Table tennis balls are sold in packets of 6. How many balls are there in 24 packets?

Individual Application

Answer these questions.

- 1. What is the product of 36 and 25?
- 2. Eggs are sold in cartons containing 12 eggs. How many eggs are there in 36 cartons?
- 3. If you sleep 8 hours each night, how many hours do you sleep in 14 nights?
- 4. Teriba plants 38 seeds in one row. How many seeds does he plant in 14 rows?
- 5. What is the product of 50 and 20?

- 1. Work out how many minutes there are in 24 hours.
- 2. The product of two numbers is 12. One number is 3. What is the other number?
- 3. The product of two numbers is 35. One number is 7. What is the other number?
- 4. A football club needs to buy 19 football balls for its teams. If each ball costs \$28, what is the total cost?
- 5. Benina sleeps 8 hours each night. How many hours does she sleep in a week?

Lesson 4: Revision of Multiplication

Group Work

Work together to do these on a sheet of paper.

- 1. 459 x 67
 2. 815 x 500
- 3. Meere bought an exercise book for \$1.95. How much will she spend for 8 books of the same type?

Individual Application

Work out the products:

1.	369 x 29	4.	372 x 800
2.	271 x 300	5.	358 x 17
3.	243 x 16	6.	452 x 600

Additional Exercise

Solve the problems:

- 1. One flying fish costs 50 cents. How much will I pay for 150 flying fish?
- 2. Nei Tebenebene sold a bottle of oil for \$2.50. How much will she get for 19 bottles?
- 3. One cup of bekei costs \$1.05. How much will 29 cups cost?

Lesson 5: Assessment

Group Work

Work out these word problems together.

- 1. At the end of a day the storekeeper received \$355.00. How much will he get in 4 days, if he receives the same amount each day?
- 2. One kilogram of pumpkin costs 75 cents. How much will a 23 kg. pumpkin cost?
- 3. A bottle of soy sauce costs \$2.15. How much will 35 bottles cost?

Individual Application

- A. Work out these products.
- 1. 179 x 17
- 2. 329 x 25
- 3. 402 x 58
- 4. 637 x 81
- 5. 515 x 93
- B. Complete these.

1.	123 x 400 () x _ x	4. 376 x 200 () x
Ans		Ans:
2.	639 x 500 () x x	5. 912 x 300 () x x
Ans	S:	Ans:
3.	728 x 800 () x x	
Ans	s:	

UNIT 20: SIMILAR AND CONGRUENT

Lesson 1: Similar Objects

Group Work

Work in your group. Draw three pairs of objects that are similar.

For example :



Display your group's work.

Individual Application

Draw three pairs of figures that are similar.

For example :

1.		
2.	 _	
3.		

Additional Exercise

Put a tick in the square box if the shapes are similar.

1.











Lesson 2: Congruent Objects

Group Work

Draw two pairs of shapes that are congruent. Choose a reporter to explain why you say that they are congruent. Display your group work.

Individual Application

Draw three pairs of figures that are congruent.



Put a tick in the box if the shapes are congruent.





Group Work

Draw two different pairs of figures which are congruent and similar.

Individual Application A. Look carefully at each pair, and write either similar or congruent.



Are these shapes similar? Write Yes if they are similar or No if they Β. are not similar.







Similar Original Congruent 1. 2. 3. 4. 6. Draw your own shapes here.

Study the example and complete. The first one is done for you.

Lesson 4: More Work on Similar and Congruent Objects

Group Work

Work in groups of three.

One of you draws a shape on a sheet of paper.

The next one draws a shape that is similar to the original.

The third one provides a congruent shape.

Then swap tasks, for example, when you have drawn the similar shape, you provide the original and so on, until you have each drawn an original shape, a similar shape and a congruent shape.

Individual Application

Copy the shapes into your exercise book. Write similar or congruent beside the shapes marked a) and b). The first one is done for you.



Additional Exercise

Draw any two figures and provide one congruent and one similar shape for them.

Figure / Shape	A similar shape	A congruent shape

Lesson 5: Assessment

Group Work

Copy each shape below. Then work together to draw a similar shape and then a congruent shape for each of the originals.









Individual Application

- A. Circle the letter of the correct answer.
- 1. Shapes or figures which have the same shape but different sizes are called _____.
- a) similar b) congruent c) irregular d) reflex
- 2. Figures or shapes which have the same angles, sides, edges and vertices are called _____.
- a) similar b) congruent c) irregular d) reflex



4. Which one is congruent to the shape in No. 3?





a) a and b. b) a and c. c) a and d. d) b and d.





Which statement is correct?

- a) (i) and (ii) are similar shapes.
- b) (i) and (ii) are regular shapes.
- c) (i) and (ii) are congruent shapes.
- d) (i) and (ii) are similar shapes.
- 8. Refer to Question 7 to circle the correct letter.
- a) (i), (ii), (iii), and (iv) are congruent.
- b) (i), (ii), (iv) are congruent.
- c) (i), (iv) are similar.
- d) No possible answer.
- 9. Which statement is correct?
- a) Similar shapes have exactly the same sizes.
- b) Congruent shapes are known as regular shapes.
- c) Congruent shapes have exactly the same sizes.
- d) Congruent shapes have different sizes.
- 10. Draw any two shapes that are similar.

UNIT 21: DIVISION

Lesson 1: Division Using Algorithms

Group Work

Together work out the following using the three methods of division, repeated subtraction, sharing and formal operations.

- 1. 24 ÷ 8
- 2. 49÷7
- 3. 72÷9

Individual Application

A. Do these using a sharing method. Question 1 is done for you.

- 1. $15 \div 5 \longrightarrow (1 | 1 | 1) (1 | 1 | 1) (1 | 1 | 1)$ Ans. = 3
- 2. 18÷3
- 3. 48 ÷ 6
- 4. 81÷9
- 5. 108 ÷ 12
- B. Do these using repeated subtraction. Question 1 is done for you.
- 1. $32 \div 8$ ____ 32 8 = 24 8 = 16 8 = 8 8 = 0 Ans = 4
- 2. 144 ÷ 12
- 3. 121 ÷ 11
- 4. 70 ÷ 10
- 5. 85 ÷ 5

Solve these using a normal division method. Question 1 is done for you.

1. $100 \div 5 = \underbrace{\begin{array}{c} 20 \\ 5 \end{array}}_{100} \underbrace{\begin{array}{c} 100 \\ 10 \\ 00 \end{array}}_{00}$ Ans. = 20 2. $120 \div 10 =$ 3. $816 \div 4 =$ 4. $344 \div 8 =$ 5. $66 \div 11 =$

Lesson 2: Division as the Inverse of Multiplication

Group Work

In your group, work out the quotient for the following. Provide a multiplication sentence for each.

Examp	ble: <u>3</u>	3 x 5 = 15
	5) 15 <u>15</u> 00	15 ÷ 5 = 3
	Ans = 3	
1.	$30 \div 3$	
2.	40 ÷ 5	
3.	60 ÷ 10	
4.	12 ÷ 3	
5.	18 ÷ 9	

Individual Application

Work out the quotient, then provide a multiplication sentence.

4

32 <u>32</u>

For example: 8 00 Ans = 4 $4 \times 8 = 32$ $32 \div 8 = 4$ 1. 42 ÷ 6 50 ÷ 10 2. 3. 16 ÷ 4 4. 70÷5 5. 24 ÷ 6

Additional Exercise

Write a division sentence and a multiplication sentence for the following.

For example:
$$7/7$$
 49
7 x 7 = 49
49 ÷ 7 = 7



Lesson 3: Missing Tens with Tens as Divisors

Group Work

Work out the missing divisors from the following problems. Provide a multiplication sentence for each problem.

1. Fifteen fish cost \$30.00. How much does each fish cost?

30 ÷		= [
	x 🗌] =	

2. One hundred and fifty pupils were placed into ten equal groups. How many pupils were there in each group?

÷	=
x 🗌	=

3. Twenty five boxes contain one hundred and twenty five bottles of coffee. Work out the number of bottles in each box.

÷	=
х 🗌	=

Groups present their work.

Individual Application

- A. Fill in the blanks.
- 2. 636 ÷ 12 = x =
- 3. 150 ÷ 10 =

- 5. 520 ÷ 13 =
- B. Write a division sentence and multiplication sentence for each of the following.



- A. Work out the quotients then provide a multiplication sentence for each of the following.
- 1. 4,700 ÷ 100 =
- 2. 8,200 ÷ 100 =
- 3. 6,900 ÷ 100 =
- 4. 5,300 ÷ 100 =
- 5. 2,600 ÷ 100 =
- B. Find the quotients then write a multiplication sentence for each of the following.
- 1. 500 ÷ 10 =
- 2. 658 ÷ 14 =
- 3. 660 ÷ 15 =
- 4. 480 ÷ 20 =
- 5. 550 ÷ 22 =

Lesson 4: Missing Hundreds with Hundreds as Divisors

Group Work

Work out the missing figures. Then provide a multiplication sentence for each problem.

- 1. $4,800 \div = 48$
- 2. 3,700 ÷ = 37 37 x 100 =
- 4. $3,700 \div \square = 37$ $37 \times 100 = \square$
- 5. $9,100 \div \boxed{} = 91$

Lesson 5: Assessment

Group Work

Read and discuss the problems together, then decide whether to write a multiplication sentence or a division sentence for each problem.

- 1. Toreka and Christina want to share twenty five dollars. How much will each have?
- 2. In a classroom there are five tables with five pupils at each table. How many children are there in the classroom?
- 3. Nei Marutaake had 100 flying fish. She shared the fish between 10 families in Buota. How many fish did each family get?
- 4. Sister Kibaria had \$50. She shared the money equally between Tereke, Mikaere, Rina and Teburantaake. How much did each of them get?
- 5. At a tennis competition, each of the 6 schools brings a team of 6 players. How many tennis players are there altogether?

Individual Application

A. Multiple choice questions: Circle the letter of the correct answer.

- 1. 24 ÷ 3 =
- a) 24 is the quotient
- b) 24 is the dividend
- c) 24 is the divisor
- d) 24 is the remainder
- 2. Refer to Q1 to define 3.
- a) 3 is the divisor
- b) 3 is the dividend
- c) 3 is the quotient
- d) 3 is the remainder
- 3. Work out the quotient for question 1.
- a) 24
- b) 3
- c) 12
- d) 8

- 4. 10 ÷ = 5
- a) The missing number is the dividend.
- b) The missing number is the divisor.
- c) The missing number is the quotient.
- d) No possible answer.
- 5. Refer to Question 4 to find what number is in the box.
- a) 5
- b) 2
- c) 1
- d) 3
- 6. What is the division sentence for $8 \div 5 = 1$ and $\frac{3}{5}$?
- a) 5 is divided by 8 is equal to 1.
- b) 8 is divided by 5 is equal to $\frac{3}{5}$
- c) 5 is multiplied by 8 is equal to 40
- d) 8 divided by 5 is equal to 1 and 3 remainder.
- 7. If you divide 32 pupils into 4 teams, how many pupils will there be in each team?
- a) 8 teams
- b) 8 pupils
- c) 36 pupils
- d) 128 pupils
- 8. 480 ÷ 10 =
- a) 48
- b) 470
- c) 490
- d) 4,800
- 9. $10 \div 2 = 5$ is the inverse of multiplication
- a) 10 x 2 = 20
- b) 10 x 5 = 50
- c) 2 x 5 = 10
- d) no answer.

10.	3,652 ÷ 100 =	13.	80 ÷ 5 =
a)	3.652	a)	75
b)	36.52	b)	85
c)	365.2	c)	8.5
d)	365,200	d)	16
11.	3,500 ÷ 100 =	14.	36 ÷ 6
a)	350	a)	30
b)	35	b)	42
c)	3.5	c)	6
d)	.3500	d)	no answer
12.	163 ÷ 100 =		
a)	.163		
b)	1.63		
c)	16.3		
d)	163		
15.	If you divide 10 by 5 you will get the a	nuotien	t answer of
a)	5	1	
b)	15		
c)	50		
d)	2		
, D	Chow your working propoduro		
D.			
10.	75÷5		
17.	162÷2		
18.	300 ÷ 10		
19.	0,∠UU ÷ 1UU		
20.	$2,300 \div 100$		

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UNIT 22: AREA

Lesson 1: Finding Areas Using Square Grids

Group Work

Draw a rectangular shape of 4 units (length) and 3 units (width). Draw any right-angled triangle and count the number of squares. Record the answer in square units.

2.

4.

Individual Application

Find the area of these rectangles by counting the squares.

1.			

	3.			
ſ				



5.

Draw square grids to show the area of these rectangles.

- 1. 2 x 6
- 2. 3 x 4
- 3. 5 x 2
- 4. 7 x 3
- 5. 5 x 6

Lesson 2: Finding Area by Using Squares and a Formula

Group Work

Work together to find the area of these rectangles using both methods (counting squares and formula). Do the work on a chart.



Choose a reporter from your group to present your work. Display your chart.

Individual Application

By using the formula and by counting squares, work out the area for Questions 1 to 5. Look at the example before you start.

Example: 6 cm. by 3 cm.

			Counting = 18 cm. ²

Formula = $L \times B = 6 \text{ cm.} \times 3 \text{ cm.} = 18 \text{ cm.}^2$

- 1. 8 cm. by 5 cm.
- 2. 7 cm. by 4 cm.
- 3. 6 cm. by 3 cm.
- 4. 5 cm. by 2 cm.
- 5. 4 cm. by 2 cm.

Use the method you prefer to find the area for these.






Individual Application

Work out the area of these rectangles using a formula.



Additional Exercise

Use the formula to find the area of these rectangles.





Lesson 4: Solving Problems Involving Finding Areas

Group Work

In your group, work out the area for these problems.

- 1. A play ground is 22 metres long and 12 metres wide. What is its surface area?
- 2. Work out the area of a sports field with a length of 10 metres and a width of 9 metres.
- 3. A classroom floor tile is 10 metres by 8 metres. What is its surface area?

Choose a reporter from your group to present the group's work.

Individual Application

Do these:

- 1. A sleeping mat 1.2 metres wide and 3 metres long is sold at a local market. What is its surface area?
- 2. The door is 2 metres by 0.75 metres. Calculate its area.
- 3. The surface area of the cupboard is 500 cm². What is its width if the length is 50 cm?
- 4. What is the width of a rectangular field with an area of 88 square metres and a length of 11 metres?
- 5. Find the length of a mat whose area is 84 spans² and whose length is 12 spans.

Lesson 5: Assessment

Individual Application

- A. Circle the letter of your correct choice.
- 1. To find the area of a rectangle:
- a) add the numbers unit and multiply by 2.
- b) use the square grid and count the number of square units.
- c) use the formula 2 + W.
- d) use the formula $2 \times W + H$.
- 1. The formula for finding the area of any rectangle is:
- a) LxW
- b) L+W
- c) 2L x W
- d) πr^2
- 2. Find the surface area of a rectangular board 3 metres long and 2 metres wide.
- a) LxH
- b) $\frac{1}{2}$ B H
- c) 3 x 2
- d) 3 + 2
- 3. What is the surface area of a rectangular table with a length of 2.5 metres and a width of 1.5 metres?
- a) 4 metres²
- b) 1 metres^2
- c) 37 metres²
- d) 3.75 metres^2
- 4. Find the length of a rectangular room with an area of 56 m^2 and a width of 7 metres.
- a) 49 m.
- b) 63 m.
- c) 8 m.
- d) 9 m.

- 5. What is the width of a rectangular table with an area of 80 cm.² and a length of 20 cm.?
- a) 4 cm.
- b) 160 cm.
- c) 100 cm.
- d) 60 cm.
- 6. The area of an exercise book 255 mm. x 205 mm. is
- a) 52275 mm.²
- b) 5227.5 mm.²
- c) 522.75 mm.²
- d) 52.275 mm.²
- 7. The area of a square table with sides of 4 metres is :
- a) 8 m²
- b) 16 m²
- c) 32 m²
- d) 36 m²
- 8. The area of a table is 36 m^2 and its width is 4m. What is its length?
- a) 36 x 4
- b) 36 + 4
- c) 36-4
- d) 36 ÷ 4
- 9. The area of a surface is:
- a) equal to the number of square units plus length x width.
- b) equal to the number of square units minus length x width.
- c) equal to the number of square units divided by the length.
- d) equal to the number of square units counted inside.

Question	Length	Breadth	Area
11.	7 m.	6 m.	m²
12.	9 cm.	cm.	27 cm ²
13.	12 m.	9 m.	m ²
14.	22 cm.	5 cm.	m ²
15.	36 cm.	7 cm.	m ²
16.	cm.	5 cm.	55 cm ²
17.	cm.	10 cm.	200 cm ²
18.	cm.	5 cm.	45 cm ²
19.	5.5 m.	m.	16.5 m ²
20.	m.	9 m.	81 m ²

B. Fill in the gaps. Show your working out.