



Province of the
EASTERN CAPE
EDUCATION

INTERMEDIATE PHASE

GRADE 6

NOVEMBER 2017

MATHEMATICS

MARKS: 75

TIME: 1½ hours

NAME: _____



This question paper consists of 16 pages.

INSTRUCTIONS TO THE LEARNER

1. Read ALL the instructions carefully.
2. QUESTION 1 consists of 10 multiple-choice questions. Circle the letter of the correct answer.
3. Answer QUESTIONS 2 to 22 in the spaces or frames provided.
4. All working must be done on the question paper and not on rough work pages.
5. The test counts 75 marks.
6. The test duration is 1½ hours.
7. The teacher will lead you through the practice exercise before you start the test.
8. You may NOT use a calculator.

PRACTICE EXERCISE

Circle the letter of the correct answer.

$$\frac{1}{2} \times 14 = \dots$$

- A 28
- B 14
- C 7
- D 2

You have answered correctly if you have circled (C) above.

NOTE:

- You will answer more questions like the one you have just completed.
- Do your best to answer each question even if you are not sure of the answer.
- Write down the answer that you think is the best and move to the next question.
- When you have answered all the questions on a page, move to the next page.
- Look only at your own work.

THE TEST STARTS ON THE NEXT PAGE.

1. Circle the letter of the correct answer.

1.1 Which of the following is the set of first five **prime numbers**?

- A 1; 3; 5; 7; 9
- B 2; 3; 5; 7; 9
- C 2; 3; 5; 7; 11
- D 2; 4; 6; 8; 10

(1)

1.2 Which of these numbers has a **factor 9**?

- A 72
- B 29
- C 83
- D 56

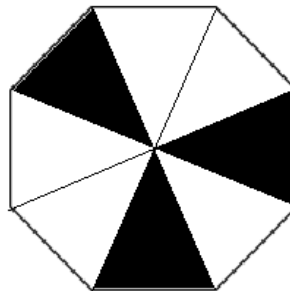
(1)

1.3 What is the value of the underlined digit in 43,89?

- A 8 units
- B 8 hundredths
- C 8 tens
- D 8 tenths

(1)

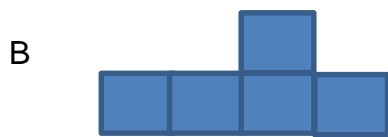
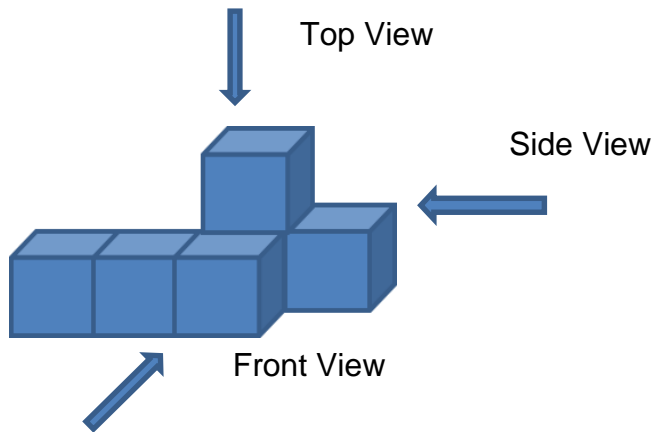
1.4 What **fraction** of the diagram is shaded?



- A $\frac{5}{8}$
- B $\frac{3}{8}$
- C $\frac{3}{6}$
- D $\frac{3}{9}$

(1)

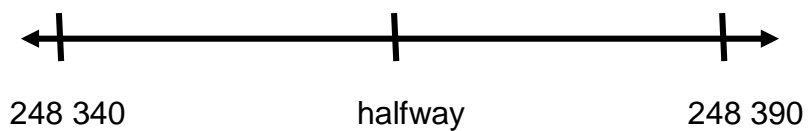
1.5 Which sketch represents the **top view** of the 3-D object?



(1)

1.6

Which number on the number line below is **halfway** between 248 340 and 248 390?



- A 124 185
- B 124 170
- C 284 745
- D 248 365

(1)

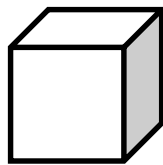
1.7 Write this time in **24-hour notation**. The time is in the afternoon.



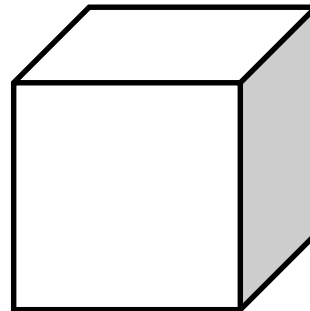
- A 08:00
- B 13:00
- C 12:00
- D 20:00

(1)

1.8 How many small **cubes** can fit inside the big cube?



2 cm



4 cm

- A 2
- B 4
- C 8
- D 16

(1)

1.9 What is the **mode** of the following winter temperatures?

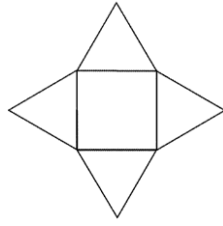
12 °C; 18 °C; 9 °C; 10 °C; 4 °C; 9 °C; 19 °C; 2 °C; 24 °C; 9 °C; 11 °C

- A 9 °C
- B 127 °C
- C 2 °C
- D 12 °C

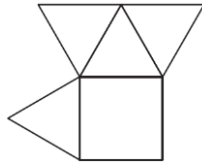
(1)

1.10 Which diagram will **not** work as a net for a **square-based pyramid**?

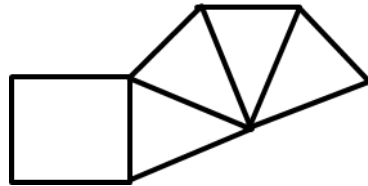
A



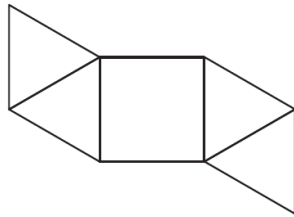
B



C



D



(1)

2. Mrs Jones travels 180 km to work. For every 20 km that she travels, her car uses 4 litres of petrol. **How many litres** of petrol does the car use to drive **to work**?

(3)

3. Round 764 386 off to the **nearest 1 000**.

(1)

4. Order the following common fractions from the **smallest to the biggest**.

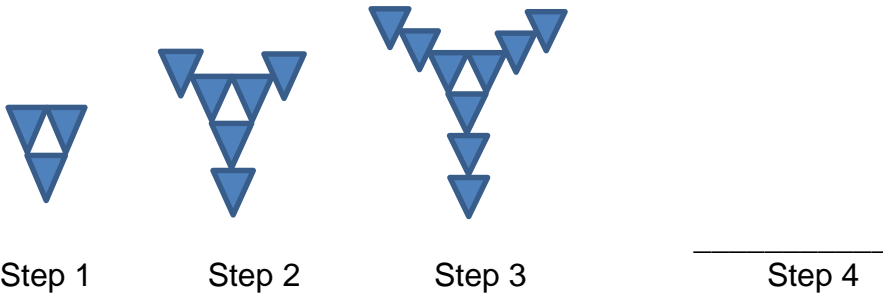
$$\frac{1}{2}; \frac{2}{5}; \frac{2}{3}; \frac{1}{4}$$

(2)

5. Mr Tom had 124 cows. He made a will that **half** of his cows be given to his wife and a **quarter** to his son. His daughter received the rest. How many cows did his daughter get?

(3)

6. Given the **pattern** below:



Step	1	2	3		10		6.3.2 ____
Shaded triangles	3	6	9		6.3.1 ____		300

6.1 Draw **step 4** in the pattern. (1)

6.2 Describe a **rule** for this pattern using your own words.

(2)

6.3 **Complete** the table above. (2)

7. **Calculate:**

$$567,38 - 197,2$$

(1)

8. **Calculate** the answers for QUESTIONS 8.1 to 8.6.

8.1 $456\,954 + 364\,637 =$

(2)

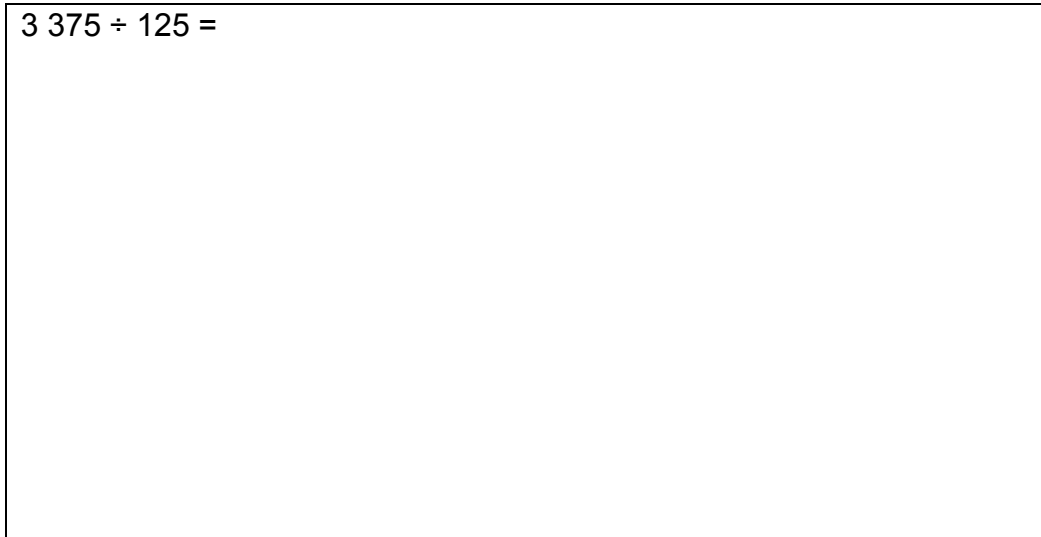
8.2 $639\,742 - 520\,834 =$

(2)

8.3 $2\,359 \times 275 =$

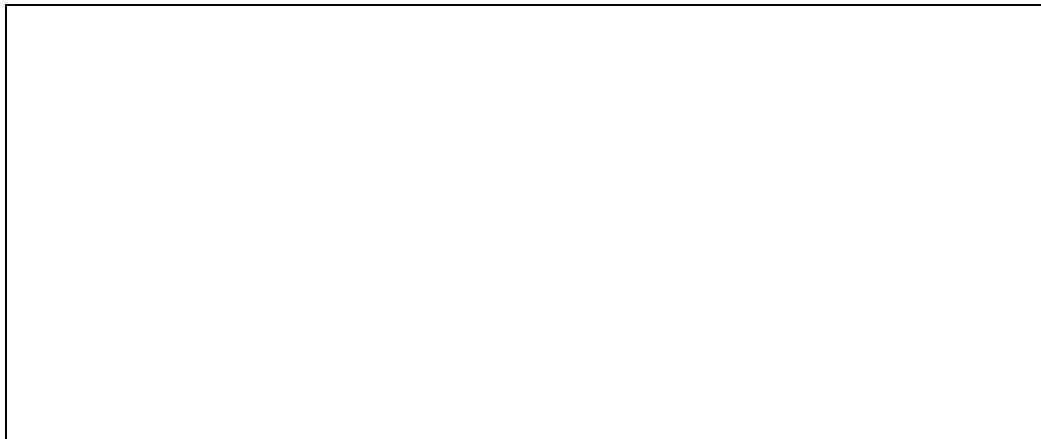
(3)

8.4 $3\,375 \div 125 =$



(3)

8.5 Calculate: $3\frac{3}{4} + 5\frac{1}{2} - 3\frac{3}{8}$



(3)

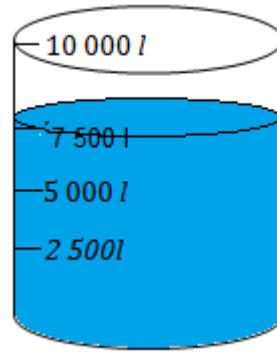
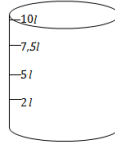
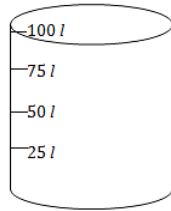
8.6 Calculate:
 $214 \div 2 \times (14 - 9)$



(2)

9. A water tank takes 10 000 ℓ of water when full. After rain the water level in the tank was 7 500 ℓ.

full.



9.1 What is the capacity of the tank in *kℓ*?

(1)

9.2 You have to fill 25 of 100 ℓ containers with water. You must use a 10 ℓ container to get water from the 10 000 ℓ tank.

9.2.1 How many times must you use the 10 ℓ container to fill a 100 ℓ container?

(2)

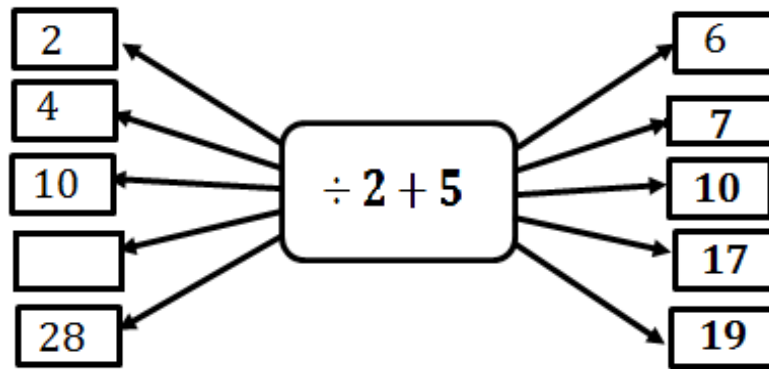
9.2.2 How many litres of water in total will have been taken from the tank for you to fill 25 of the 100 ℓ containers?

(2)

10. A Grade 6 class has 40 learners. The ratio of girls to boys is 5 : 3. How many girls are in this class?

(3)

11. Complete the flow diagram:



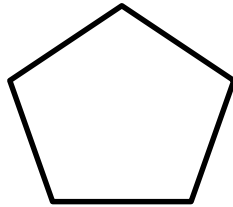
(1)

12. Complete the following sentence:

2 kg of sugar has exactly the same mass as _____ g of sugar.

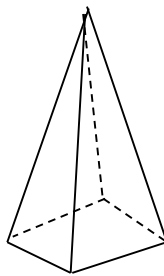
(1)

13. How many lines of symmetry are there in the following 2D object?



(1)

14. Answer the following questions about the given object.



14.1 Name the 3D object: _____

(1)

14.2 Number of faces: _____

(1)

14.3 Number of vertices: _____

(1)

15. Complete the table below:

Common Fraction	Decimal Fraction	Percentage
$\frac{1}{2}$	0,5	50%
$\frac{6}{10}$	0,6	15.1 _____
15.2 _____	0,75	75%

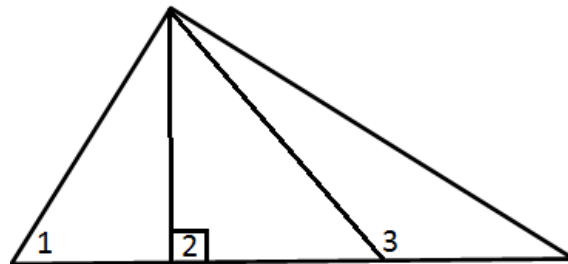
(1)

(1)

15.3 A shirt costs R75 before it was discounted to R60. Calculate the **percentage** discount.

(2)

16. Study the following diagram and answer the questions that follow.



16.1 How many **triangles** are there in the shape above?

(1)



16.2 What is the **name of angle 1** in the 2D shape above?

(1)

17. Mpho has to fit wheels to bicycles and tricycles. He has 20 wheels altogether in his shop. How many bicycles and tricycles can he fit?

(2)

18. Read the time on the world clocks and answer the following questions.

	
Rome Time in the morning (a.m.)	Tokyo Time in the morning (a.m.)

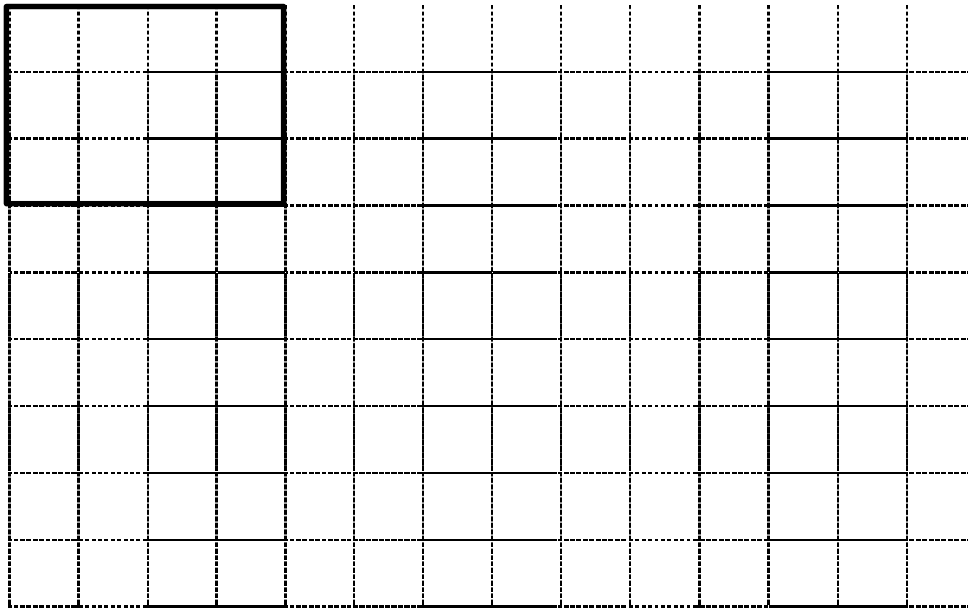
- 18.1 Calculate the time difference between Rome and Tokyo.

(1)

- 18.2 If it is 20:50 in Rome, what time will it be in **Tokyo in 24-hour** notation?

(1)

19. On the grid given below, a 2D shape that has a length of 4 units and a breadth of 3 units is drawn. (1 block = 1 unit)



19.1 What is the **area** of the shape?

(1)

19.2 On the grid, draw an enlargement of the given rectangle two times its size.

(2)

20.

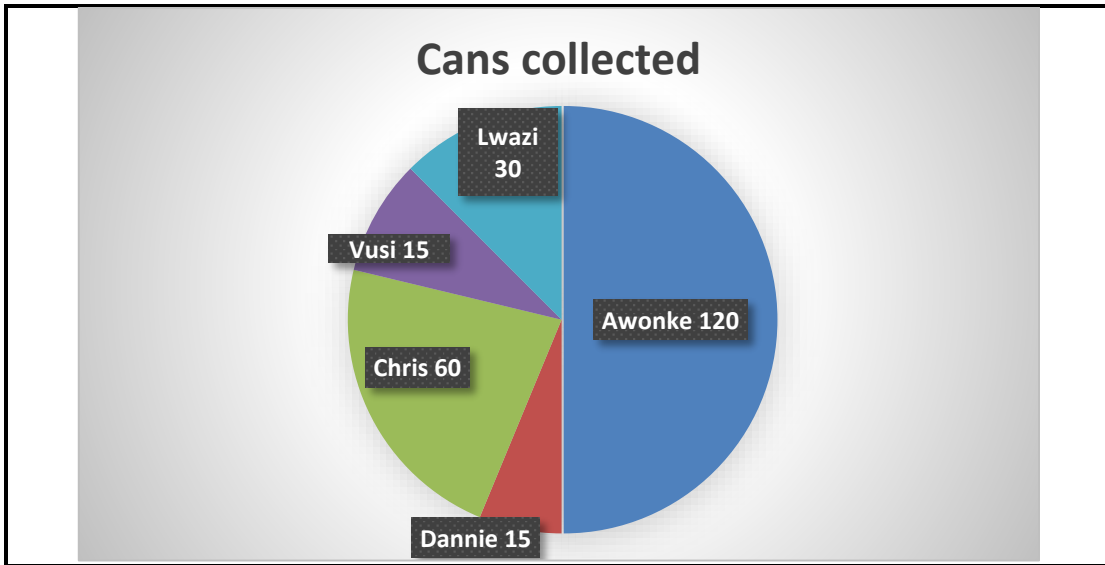
To travel from the FILLING STATION in cell F4 to THE MALL in cell E9:

Travel North East on R88 and continue until you meet the Great North Road. Turn left onto the Great North Road. Pass the crossing with the gravel road G42, Cross the river. Keep going until you get to THE MALL on the left side of the road.

If you follow the directions above, through which cells will you pass between the G42 turnoff and the R31?

(1)

21. The following pie chart indicates the number of cans collected by each learner for a recycling project. The total number of cans collected is 240.



- 21.1 Who must Awonke combine his cans with to get $\frac{3}{4}$ of 240?

(2)

- 21.2 What percentage of cans did Chris collect?

(2)

- 21.3 What fraction of cans did Lwazi collect?

(2)

22. What is the probability of getting a 5 when tossing the die (dice) below?



(1)

TOTAL: 75