



Province of the
EASTERN CAPE
EDUCATION

INTERMEDIATE PHASE

GRADE 6

NOVEMBER 2018

MATHEMATICS

MARKS: 75

TIME: 1½ hours

NAME: _____



This question paper consists of 14 pages.

INSTRUCTIONS TO THE LEARNER

1. Read ALL the instructions carefully.
2. QUESTION 1 consists of ten (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.

$$(79 - 21) \div 2 = \dots$$

- A 50
- B 58
- C 29
- D 26

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 a **prime number**?

- A 1
 B 2
 C 0
 D 4
- (1)

1.2 Which of these numbers is both a perfect **square and a cube**?

- A 1
 B 3
 C 8
 D 2
- (1)

1.3 Write as a **whole number**:

$$(5 \times 10\,000\,000) + (2 \times 1\,000\,000) + (7 \times 100\,000) \times (3 \times 1)$$

- A 52 070 300
 B 52 700 030
 C 52 730 000
 D 52 700 003
- (1)

1.4 Which number is 12 million **more than** 375 826 307?

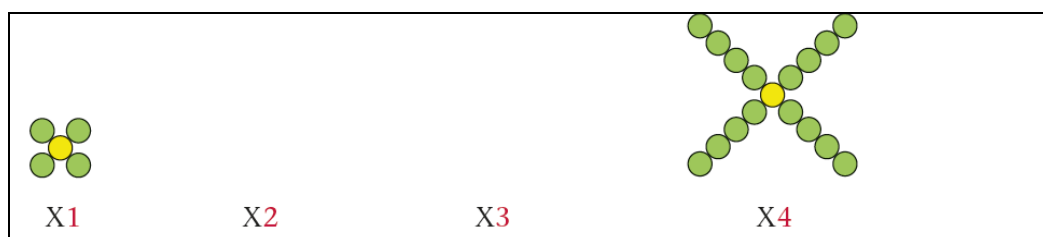
- A 363 826 307
 B 253 826 307
 C 387 826 307
 D 375 946 195
- (1)

1.5 What is the missing amount in the box in the following **number**

sentence $\frac{\square}{12} = 3$?

- A 4
 B 36
 C 15
 D 8
- (1)

1.6 Mary uses beads to make X pattern as in the following diagram. How many beads will she have in shape X2 and X3?



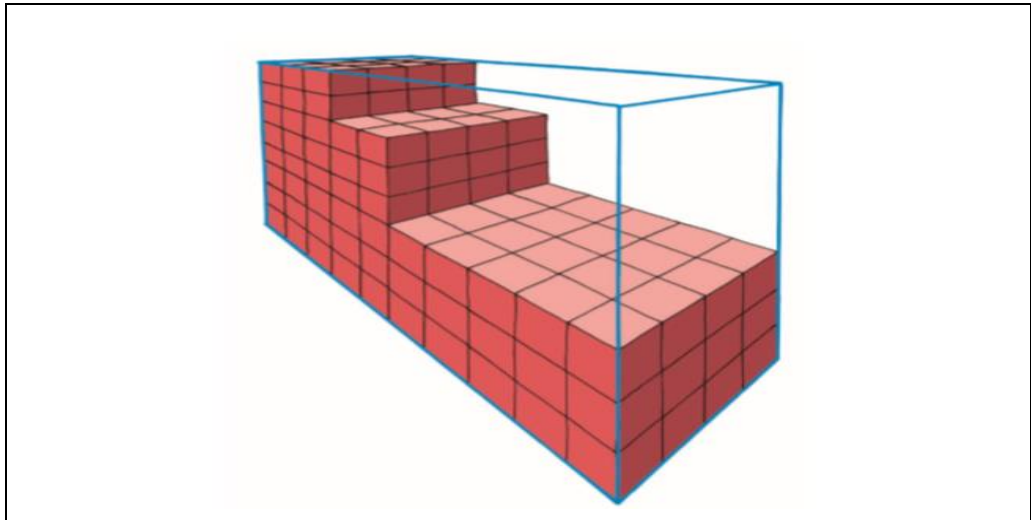
- A X2 (9 beads) and X3 (13 beads)
 B X2 (7 beads) and X3 (11 beads)
 C X2 (14 beads) and X3 (28 beads)
 D X2 (10 beads) and X3 (15 beads)
- (1)

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



- A 22:00.
B 11:08.
C 23:38.
D 08:53. (1)
- 1.8 Thandi cycles 2 km to school, Sandy cycles 1 575 m to school and Aviwe cycles 3,5 km to school. What distance do all three children cycle altogether?
- A 7 km
B 7 000 m
C 7,075 km
D 7 750 m (1)
- 1.9 Miss Mantewu's class has 48 learners. 36 of them are girls. Which of the following is the **ratio** of boys to girls?
- A 1 : 4
B 2 : 3
C 1 : 3
D 3 : 4 (1)

1.10 How many cubes must be put into this box to fill it completely?



- A 120
- B 136
- C 320
- D 116

(1)

2. In your classroom there are 8 red chairs. There are 2 times as many yellow chairs as red chairs, and the blue chairs are 3 fewer than yellow chairs. How many chairs are there in your classroom?

(3)

3. Round 49 287 off to the nearest 10 000.

(1)

4. Use the digits below to answer the following questions.

5 7 2 9

- 4.1 The biggest 4 digit number you can make is:

(1)

- 4.2 Make a 4 digit number where the 9 has the place value of a hundred and the 5 is the ten.

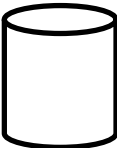
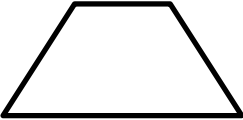
(1)

5. Order the following **decimal fractions** from the **biggest to the smallest**.

0,5; 0,050; 0,75; 0,570

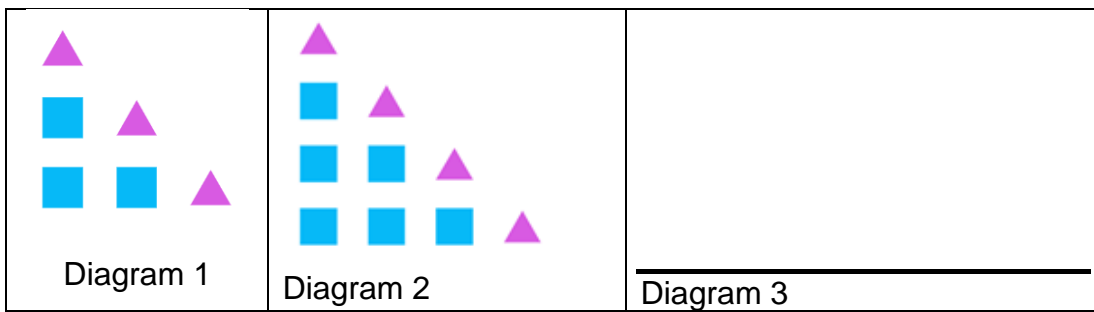
(1)

6. Complete the following table by filling in the name of the shape or object:

	Name of shape or object	Shape or object
6.1	_____	
6.2	_____	

(2)

7. Given the **pattern** below:



7.1 Draw the pattern in **diagram 3**. (2)

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

(2)

7.3 **Complete** the table below.

	Step 1	Step 2	Step 3
Squares	3	6	7.3.1 _____
Triangle	3	4	7.3.2

(2)

8. **Calculate** the answers for QUESTIONS 8.1 to 8.5.

8.1 $598\ 456 + 458\ 105 =$

(2)

8.2 $956\ 250 - 689\ 231 =$

(2)

8.3 $3\,590 \times 621 =$

(3)

8.4 $3\,865 \div 120 =$

(3)

8.5 Calculate: $2\frac{3}{4} + 6\frac{1}{3} - 5\frac{3}{8}$

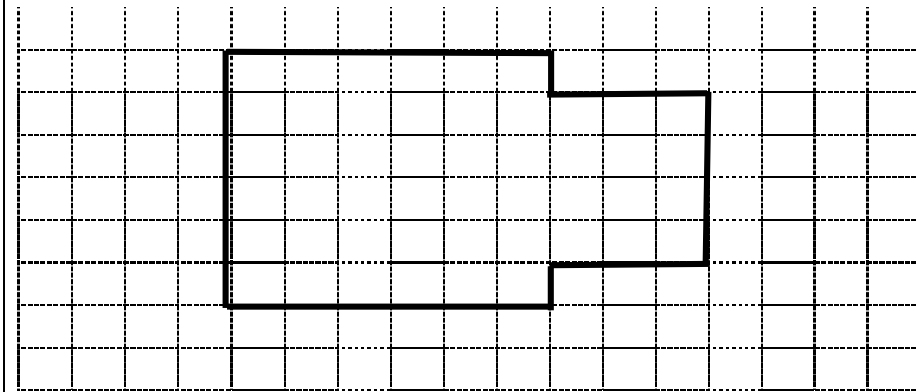
(3)

8.6 Calculate:

$20 \times (2 + 14) - 13$

(2)

9. The unfolding of a rectangular prism was drawn on the grid paper. A 2-D shape is drawn on a grid as shown in the diagram below. 1 square represents 1 unit.



9.1 Determine the **perimeter** of the 2-D shape.

(2)

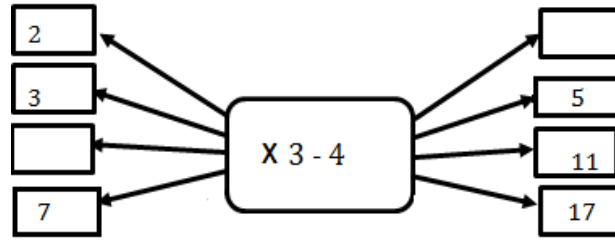
9.2 Determine the **area** of the 2-D shape.

(2)

10. 216 pairs of shoes cost R2 240. How much will one pair of the same shoes cost?

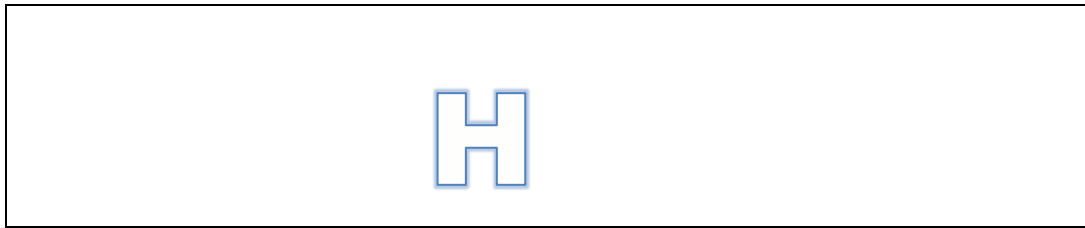
(3)

11. Complete the flow diagram by filling in the missing numbers:



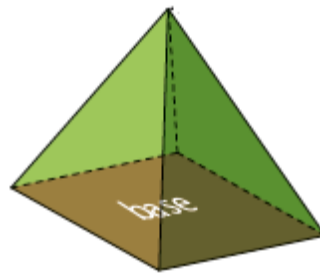
(2)

12. Draw lines of **symmetry** in the shape below.



(1)

13. Answer the following questions about the given object.



13.1 What are the shapes of the faces of this pyramid?

(2)

13.2 How many vertices does it have? _____

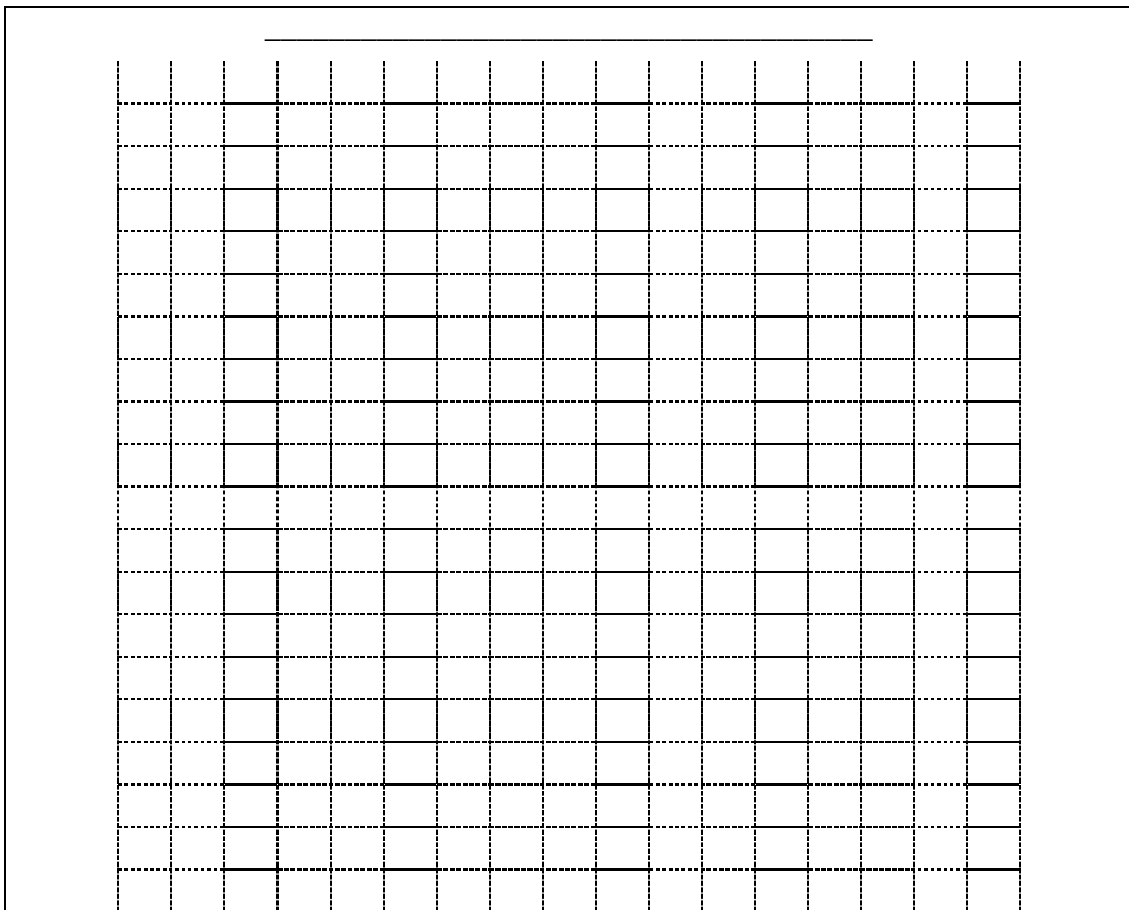
(1)

14. Khanyisa owns a restaurant and wanted to find out what her customers preferred. She set up a questionnaire for her customers and her results were as follow.

Service	Customers
Take-away	21
Sit-down restaurant	35
Kids play area	17
Outside area	27

- 14.1 How many customers answered Khanyisa’s questionnaire? (1)

- 14.2 On grid below draw a bar graph to show Khanyisa’s results.

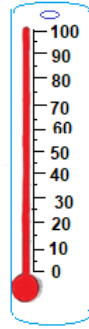


(4)

- 14.3 Which is the most popular service customers preferred?

(1)

15. 15.1 In the thermometer below indicate by means of an arrow the temperature that shows room temperature.



(1)

- 15.2 What temperature reading is shown by the thermometer above?

(1)

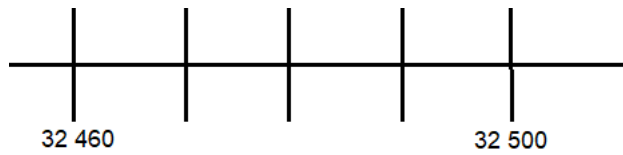
16. VAT has now increased to 15%. A school jacket costs R575 before VAT. What is the price of the jacket with VAT included?

(2)

17. When two numbers are multiplied, the product 24 and their sum is 11. What are the two numbers?

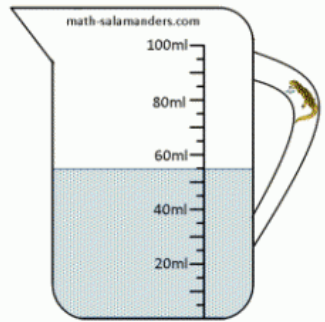
(2)

18. Write down the number which is half-way between the two given numbers in the number line.



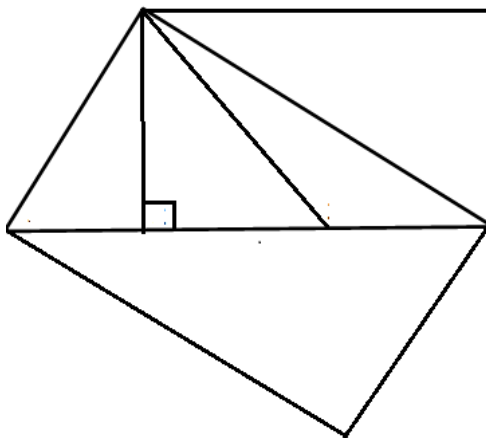
_____ (2)

19. The amount of liquid in the jar is as shown in picture below. Convert the number of millilitres of liquid to litres.



_____ (2)

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



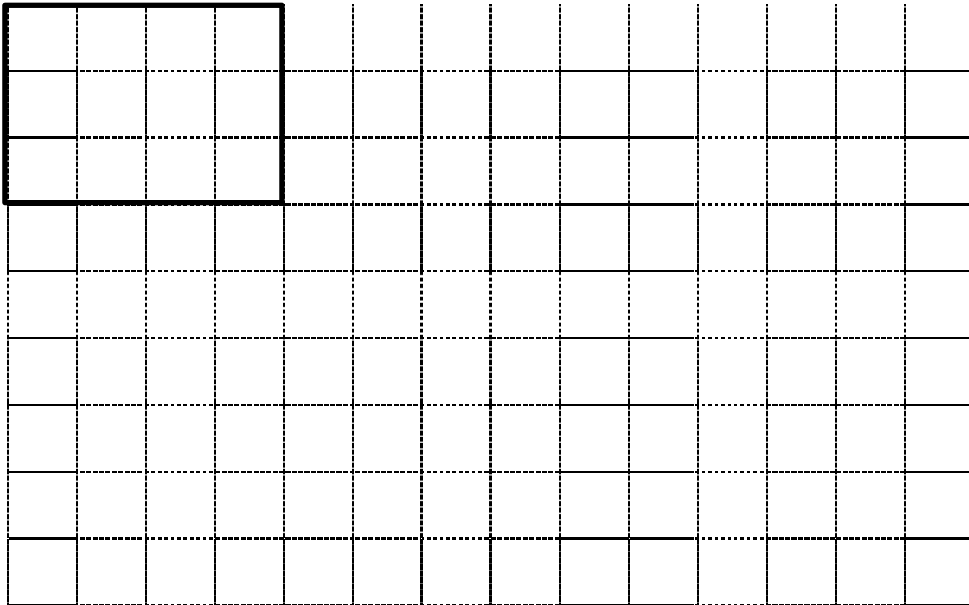
- 20.1 How many **triangles** are there in the shape above?

_____ (1)

- 20.2 How many **rectangles** are there in the shape above?

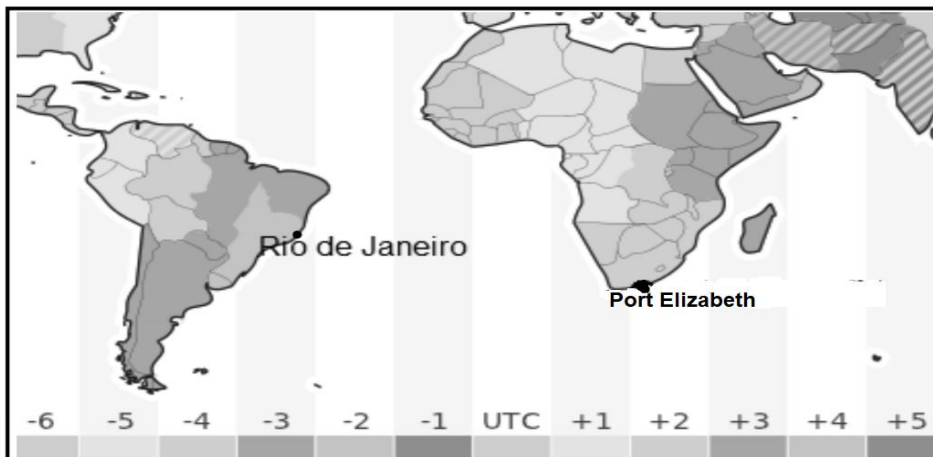
_____ (1)

21. 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)
Enlarge the shape by 2.



(2)

22. Study the map below and answer the question that follow.



What time is it in Port Elizabeth if the time in Rio de Janeiro is 10:00?

(1)

23. What is the probability of getting a 7 if you roll a 12-sided dice like the one shown below with numbers 1 to 12?



(1)

TOTAL: 75