GAUTENG DEPARTMENT OF EDUCATION

PROVINCIAL EXAMINATION

JUNE 2017

GRADE 6

MATHEMATICS

DISTRICT_____

SCHOOL NAME _____

CLASS (e.g. 6A) _____

NAME AND SURNAME _____

17 pages

GAUTENG DEPARTMENT OF EDUCATION

PROVINCIAL EXAMINATION

MATHEMATICS

TIME: 1½ hours
MARKS: 75

INSTRUCTIONS

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 20 in the spaces or frames provided.

4. All calculations must be shown on the question paper and may not be done on separate rough paper.

5. Write neatly and legibly.

6. The use of a calculator is not allowed.

SECTION A

MULTIPLE-CHOICE QUESTIONS

1.   Circle the letter of the correct answer.

1.1   What is the value of the underlined digit in 34 $\underline{5}$02 344?

A   50 000

B   500 000

C   5

D   5 000 000   (1)

1.2   Which of the following fractions has the highest value?

$\dfrac{3}{5} ; \dfrac{3}{4} ; \dfrac{4}{10} ; \dfrac{1}{2}$

A $\dfrac{3}{5}$

B $\dfrac{3}{4}$

C $\dfrac{4}{10}$

D $\dfrac{1}{2}$ (1)

1.3   What is $12,25 \times 10$?

A   1,225

B   12 250

C   1 225

D   122,5   (1)

1.4 What is the missing number in the following number sentence?

$(250 + 0 + 50) \times \boxed{} = 300$

A   600

B   1

C   0

D   6   (1)

1.5 What is the next number in the following sequence?

7,5 ; 7,7 ; 7,9 ; ...

A   8,1

B   7,11

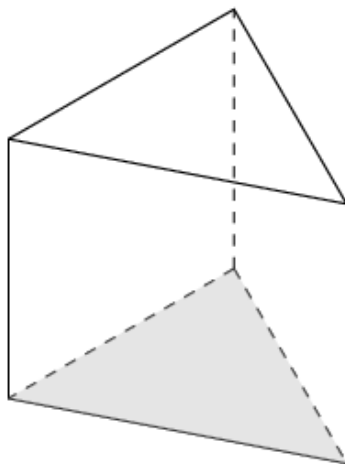C   9,9

D   8,11   (1)

1.6 What is the name of the 3-D object illustrated below?

A   A rectangular prism
B   A triangular prism
C   A triangular-based pyramid
D   A rectangular-based pyramid   (1)

1.7   What 3-D object has 9 vertices, 16 edges and 9 faces?

    A   Nonagon

    B   Octagon

    C   Octagonal pyramid

    D   Octagonal prism   (1)

1.8   The following pictograph is a representation of the number of visitors at a water park per month. How many more visitors were there in March than in February?

    Number of visitors to the water park per month

    A   3

    B   1 000

    C   1 500

    D   7 500   (1)

1.9   What is the median of the following data set?

    55 ; 67 ; 75 ; 42 ; 75 ; 19 ; 88 ; 31 ; 8 ; 75 ; 12

    A   88

    B   75

    C   19

    D   55   (1)

1.10 What is the mode of the following data set?

12 ; 17 ; 17 ; 12 ; 30 ; 25 ; 17 ; 10 ; 26 ; 18 ; 20

A   30

B   25

C   12

D   17 (1)

[10]

2. Answer the following questions in the spaces provided:

2.1 Rounding off:

2.1.1 Round 19 455 off to the nearest 10. _____ (1)

2.1.2 Round 28 498 off to the nearest 1 000. _____ (1)

2.2 Choose ONE number from the box that is being described in each statement.

30	80	
	37	9
31	39	4

2.2.1 A multiple of 15: _____ (1)

2.2.2 A prime number between 35 and 40: _____ (1)

2.2.3 A factor of 40: _____ (1)

2.3 Fill in the missing number in the number sentence:

$378 + 10 - 6 + 6 - \ ... = 378$ (1)

[6]

3   Calculate the answers for Question 3. Use any method. Show your steps.

3.1   348 143 + 594 845

(2)

3.2   98 268 – 95 931

(2)

3.3   5 463 × 35

(3)

3.4   7 557 ÷ 25

(3)

3.5 $3\dfrac{2}{9} + 4\dfrac{5}{9} =$

(2)

3.6 $\dfrac{9}{10} - \dfrac{2}{5} =$

(2)

3.7 $\dfrac{3}{7}$ of 91

(2)

3.8 $9,45 + 3,2 =$
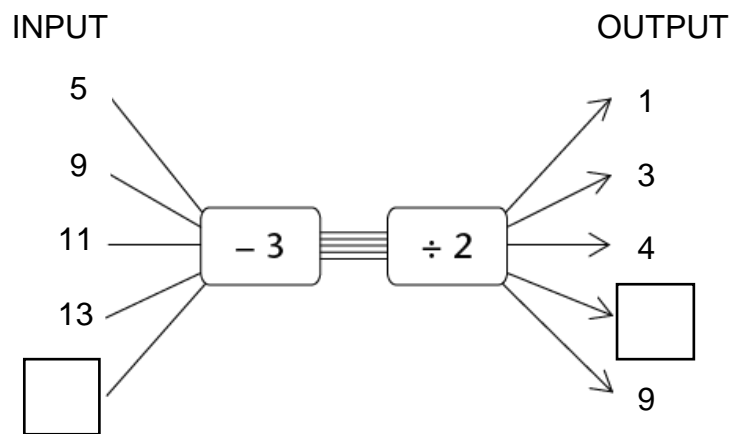
(2)

3.9 $54 \div (9 - 3) + 4 =$

(2)

[20]

4. Complete the table below with an equivalent fraction, decimal fraction and percentage.

Fraction	Decimal fraction	Percentage
$\dfrac{3}{10}$	0,3	
$\dfrac{3}{4}$		75%
	0,5	50%

[3]
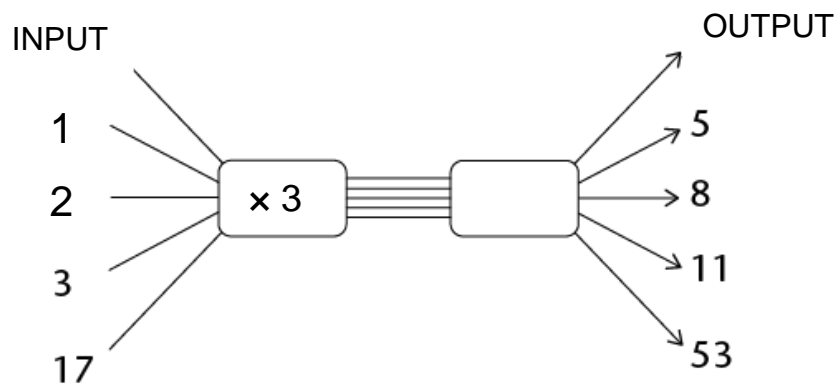
5.   Answer the questions about the flow diagrams.

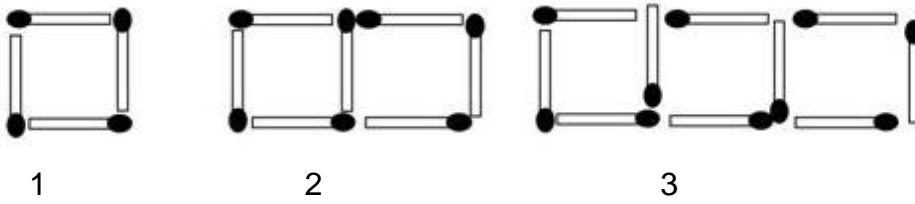5.1   Fill in the missing input and output number in the following flow diagram.

INPUT   OUTPUT

5   1

9   3

11   — 3   ÷ 2   → 4

13

[ ]   9

(2)

5.2   Complete the flow diagram below by filling in the missing rule

INPUT   OUTPUT

1

2   × 3   5

3   8

17   11

53

(1)

[3]

6.   Examine the diagram pattern below and answer the questions that follow.

    1   2   3

    6.1   How many matches are added each time to make another square?

            _____   (1)

    6.2   Fill in the missing number in the table, based on the pattern.

Number of squares	1	2	3	10
Number of match sticks	4	7	10	

                                                                                         (1)
                                                                                         [2]

7.   Sabelo trains for a marathon by running every day for 7 days. Each day he runs twice as
       far as he did the previous day. On day 1 he ran 1 km. Use the table below to answer the
       questions.

Day	1	2	3	4	5	6	7
Distance in Km	1	2	4				

    7.1   How far did Sabelo run on day 7?
            _____   (1)

    7.2   On which day did Sabelo run 32 km?
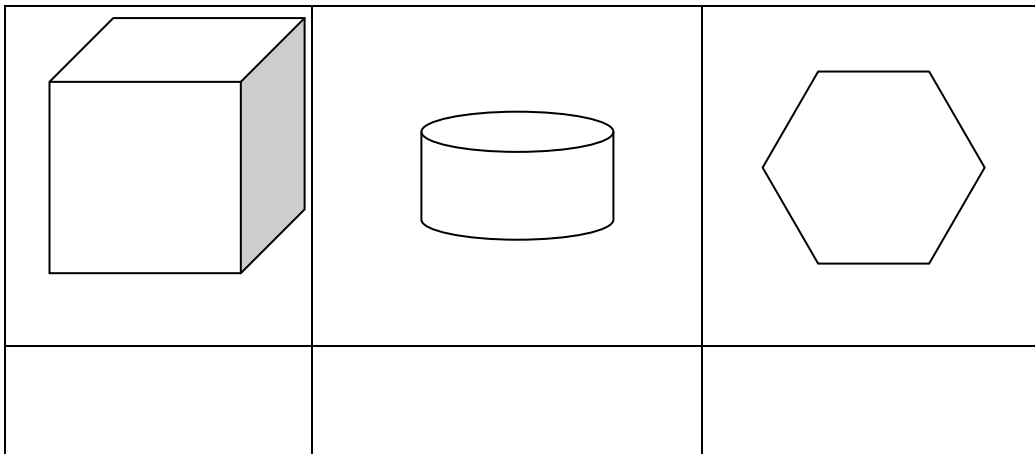   _____   (1)

    7.3   Ayanda also ran every day for 7 days. He ran 12 km on day 1. Each day he ran
            5 km further than he did the previous day. On which day did Ayanda run twice as
            far as Sabelo?

                                                                                         (1)
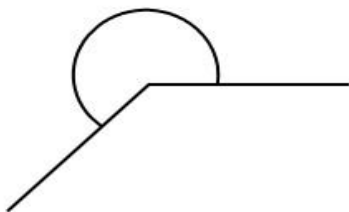   **[3]**

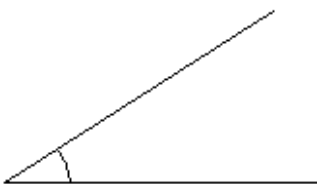8.   Write down the name of each figure in the spaces below.

[3]

9.   Draw all the lines of symmetry for the rectangle below.

[1]

10.   Name the kinds of angles represented in each diagram below.
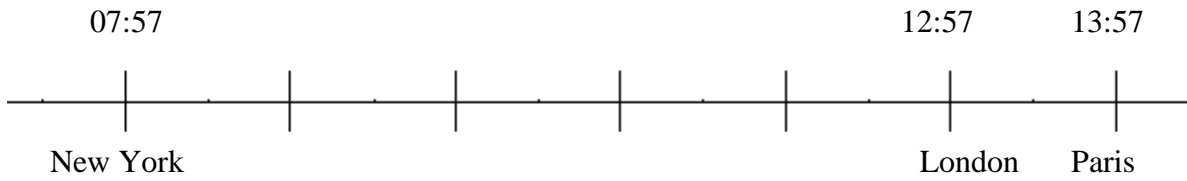
10.1

_____   (1)

10.2

_____   (1)

10.3

_____   (1)

[3]

P.T.O.

11.   At a particular moment, times are noted in cities around the world. Use the timeline to answer the questions that follow.

07:57   12:57   13:57

New York   London   Paris

   11.1   What is the time difference between New York and Paris?

   _____   (1)

   11.2   What will the time be in New York if it is 14:14 in London?

   _____   (1)
                                                                            [2]

12.   The analogue clock face below shows the time in the afternoon. Write the time indicated in 12-hour digital time. Remember to indicate a.m. or p.m.

_____   **[2]**

13. A movie starts at 19:15 and ends two hours and 25 minutes later. At what time did the movie end?

[2]

14. Convert the following measurements:

14.1   3 ℓ 68 $m\ell$ = _____ ℓ (1)

14.2 $12\dfrac{1}{2}$ $k\ell$ = _____ ℓ (1)

14.2   4 decades = _____ years   (1)

[3]

15. Mary poured 3,8 ℓ of water into a jug. During the day, she drank 500 $m\ell$ of the water. How much water was left in the jug?
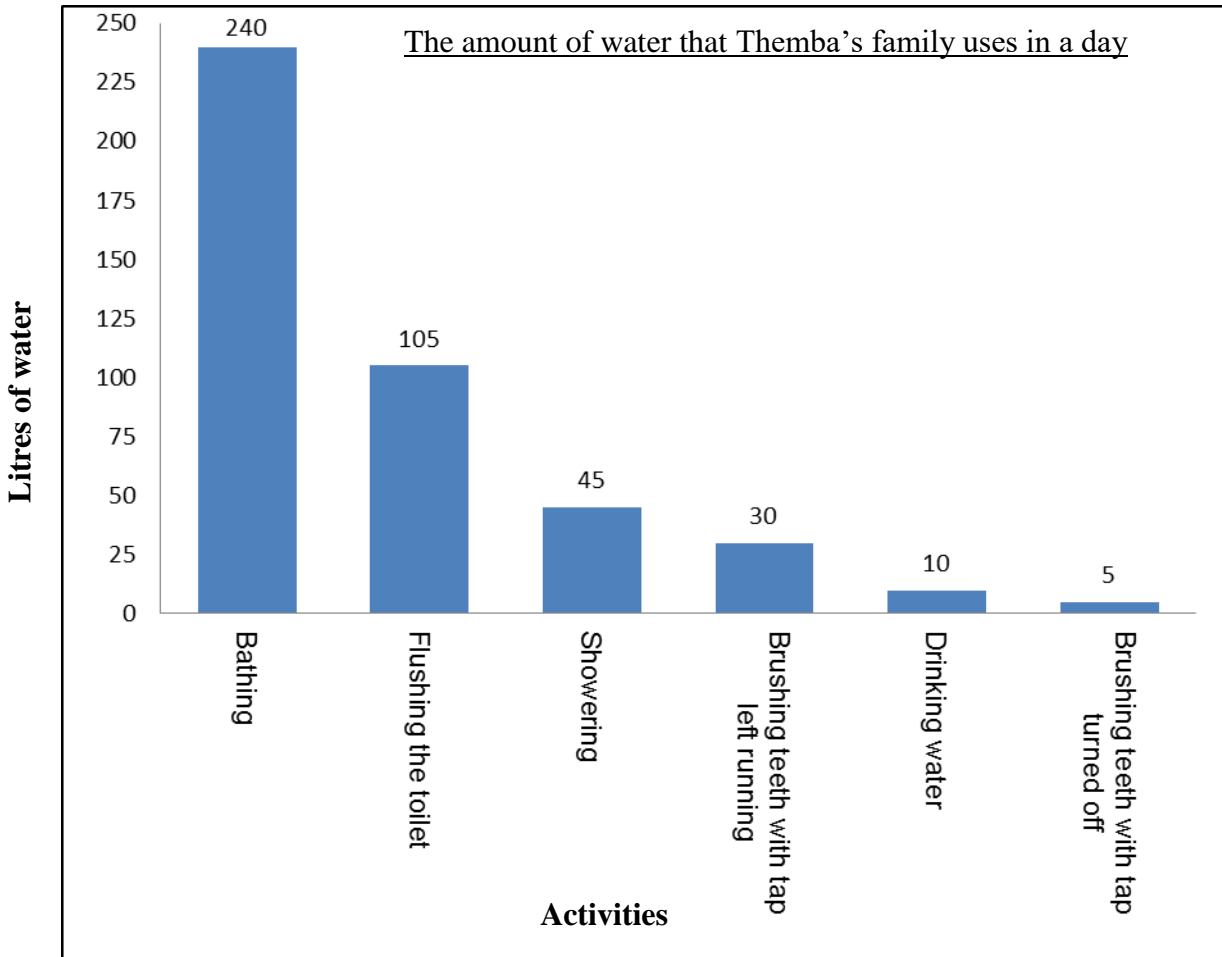
[2]

16. The data below shows the cold drinks sold by Mrs Smith over the weekend. Draw a bar graph to represent this data.

Day	Saturday	Sunday
Number of cold drinks sold	30	45

Cold drink sales over the weekend

Number of cold drinks sold

50

40

30

20

10

0

Saturday   Sunday

Day of the week
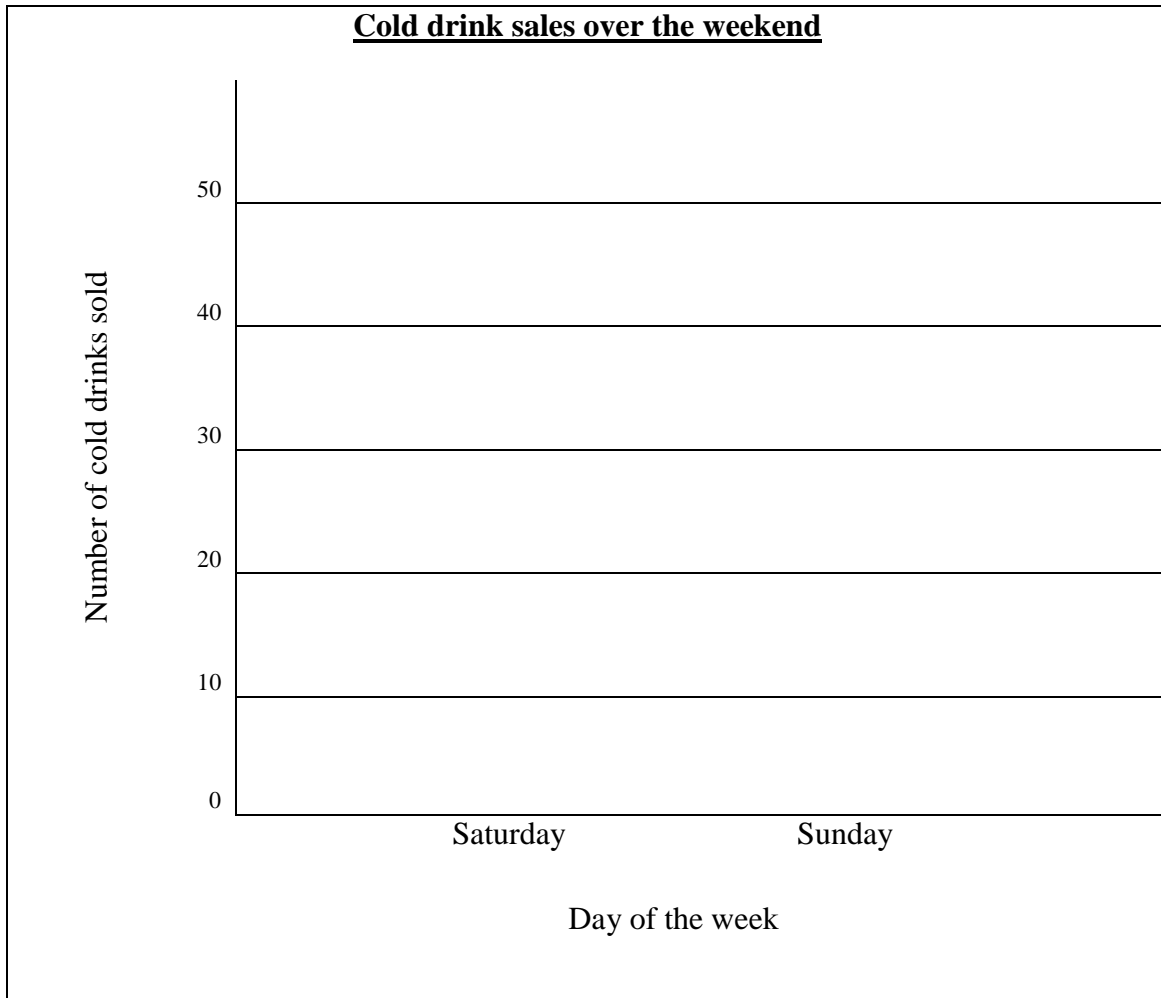
[2]

17. Answer the questions about the graph below.

The amount of water that Themba's family uses in a day

17.1 Which activity in this home uses the most water in one day?

_____ (1)

17.2 How much more water is used when the tap is left on while brushing teeth, than if the tap is turned off while brushing teeth?
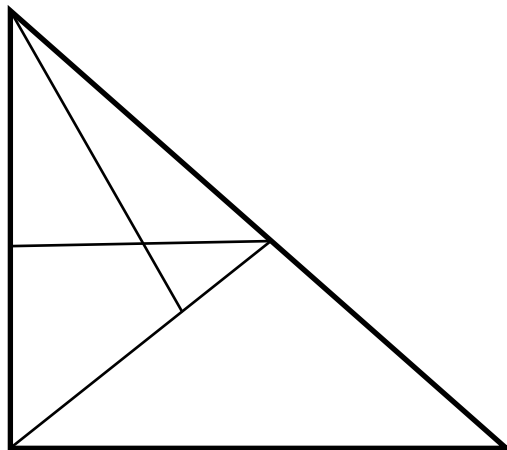
_____ (1)

[2]

18. A snail crawls at a steady rate of 8 cm every 10 minutes. How far will it crawl in 25 minutes?

[2]

19. Linda received R483 for her birthday. She decided to save one third of her money, and spend the rest on a new pair of shoes. How much did her shoes cost?

[2]

20. How many triangles of different sizes are there in the following diagram?

_____ **[2]**

TOTAL: 75

END