GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

GAUTENG DEPARTMENT OF EDUCATION
PROVINCIAL EXAMINATION
2015
GRADE 6

MATHEMATICS

DISTRICT_____

SCHOOL NAME _____

EMIS NUMBER (9 digits)

CLASS (e.g. 6A) _____

SURNAME _____

NAME_____

GENDER (✓)

BOY			GIRL	

16 pages

GAUTENG DEPARTMENT OF EDUCATION
PROVINCIAL EXAMINATION

MATHEMATICS

MARKS: 75

TIME: 1½ hours

INSTRUCTIONS

1. Read all the instructions carefully.

2. Question 1 consists of 10 multiple-choice questions. You must circle the letter of the correct answer.

3. Answer questions 2 to 23 in the spaces or frames provided.

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

5. The test duration is 90 minutes.

6. The test is out of 75 marks.

7. The use of a calculator is not allowed.

SECTION A

MULTIPLE-CHOICE QUESTIONS

Circle the letter of the correct answer.

1   1.1   What is the value of the underlined digit in 6**4** 379 568?

        A   4 x 10 000 000

        B   4 x 100 000

        C   4 x 1 000 000

        D   40 000 000   (1)

    1.2   Which is the largest number?

        A   231 323 689

        B   231 230 689

        C   231 302 689

        D   231 320 689   (1)

    1.3   Which number is missing in this number pattern?

        9,27 ; 9,25 ; 9,23 ; _____ ; 9,19

        A   0,21

        B   9,20

        C   9,12

        D   9,21   (1)

    1.4   Round off 5 697 to the nearest 10.

        A   5 700

        B   5 695

        C   5 690

        D   5 600   (1)

1.5 Which improper fraction is equal to $2\frac{1}{2}$?

A $\frac{5}{4}$

B $\frac{5}{2}$

C $\frac{5}{1}$

D $\frac{7}{2}$

(1)

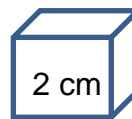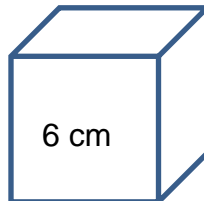1.6 Which number is NOT a multiple of 12?

A 12

B 36

C 276

D 112

(1)

1.7 How many small cubes fit exactly into the big cube?

A 9

B 12

C 20

D 27

6 cm   2 cm

(1)

1.8 Write as a whole number:

(6 × 1 000 000) + (5 × 100 000) + (1 × 1 000) + (8 × 1) =

A 6 501 800

B 6 510 008

C 6 501 008

D 6 501 080

(1)

1.9 Look at the clock. What is the time in 24 hours' time if it is now in the afternoon?

A 12:00

B 20:00

C 14:00

D 02:00 (1)

1.10 What is the mass being shown on the scale?
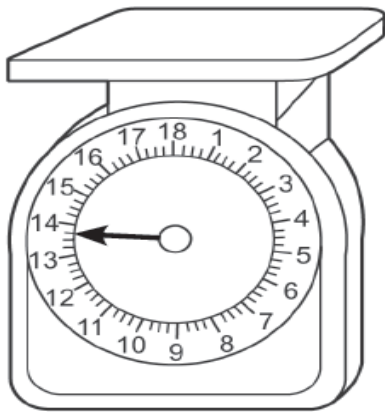
A 14,75 kg

B 13,75 kg

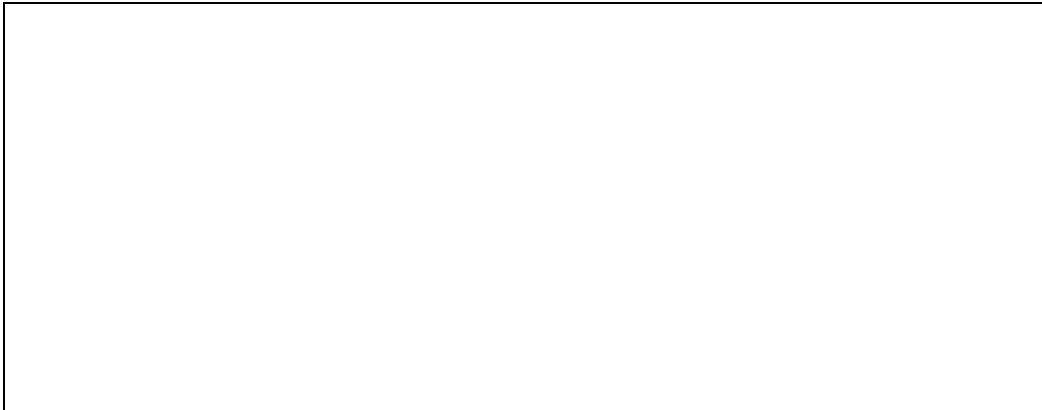C 13,5 kg
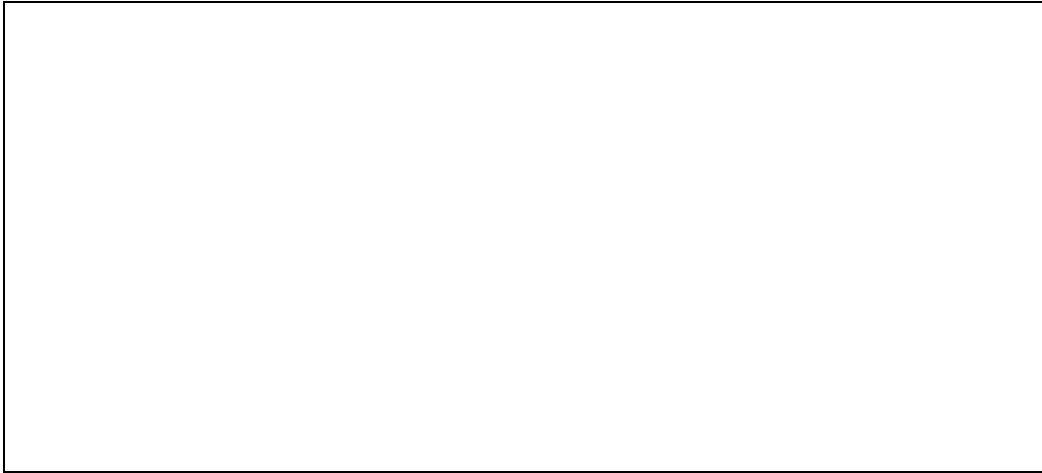
D 13,8 kg (1)

[10]

SECTION B

Calculate the answers for questions 2.1 to 2.10. You may use any method. Show all your calculations.

2   2.1   7 211 568 + 5 722 188

(2)

2.2   4 071 274 – 2 128 863

(2)

2.3   4 748 × 36

(3)

2.4   7 675 ÷ 25

(3)

2.5 $2\dfrac{6}{7} + 3\dfrac{1}{14}$

(3)

2.6 $5\dfrac{7}{8} - 1\dfrac{4}{8}$

(2)

2.7   45,05 – 19,21

(2)

2.8   What is 40% of 150?

(2)

2.9   10 × (3 + 15) – 6

(2)

2.10   18,03 × 100 = _____   (1)

3. A cyclist travels at a constant speed of 30 km per hour. How far will he/she travel in $4\frac{1}{2}$ hours?

(3)

4 Complete the table:

FRACTION	DECIMAL	PERCENTAGE
$\dfrac{4}{10}$	0,4	
$\dfrac{75}{100}$		75%

(2)

5 5.1 How many different factors does the number 30 have?

_____

(1)

5.2 Which factors of 27 are also prime numbers?

_____ (1)

6 Complete:

$9 \times 4 \div$ _____ $= 1$ (1)

P.T.O.

7   Complete the flow diagram by filling in the missing number.

5 ⟶ \
6 ⟶ x 2 + ▢ ⟶ 13
7 ⟶   ⟶ 15
        ⟶ 17
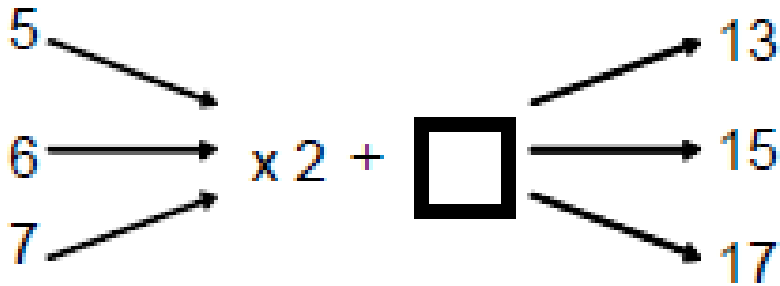
(1)

8   Look at the pattern made from blocks.

       Model 1   Model 2   Model 3
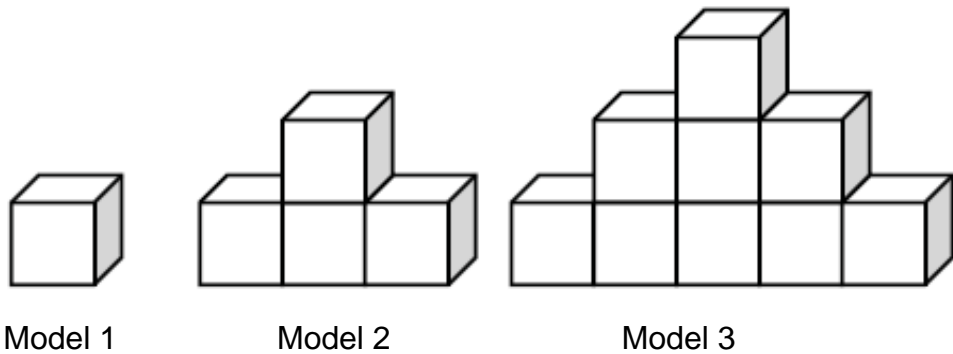
8.1   How many blocks will you need to build model 4?
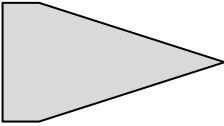
_____ (1)
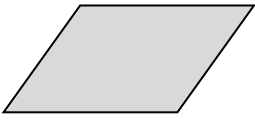
8.2   What is the rule for calculating the number of blocks, if the model number is given?

_____ (1)

8.3   How many rows tall will a model be, if it is made with 36 blocks?

_____ (1)

9   Match column A with column B. Write the correct letter in column C.

Column A		Column B		Column C
9.1	A trapezium	A		9.1 _____
9.2	The shape that is NOT a quadrilateral	B		9.2 _____
9.3	A parallelogram	C		9.3 _____
		D		

(3)

10   Use the types of angles listed in the box to complete the statements below.

an acute angle	an obtuse angle	a revolution
a straight line	a reflex angle	a right angle

10.1   An angle smaller than 90 degrees is called _____

(1)

10.2   If I add two obtuse angles, the resulting angle will always be

_____

(1)

10.3   An angle that is equal to 360 degrees is called _____   (1)

11   Look at the object and answer the questions that follow.
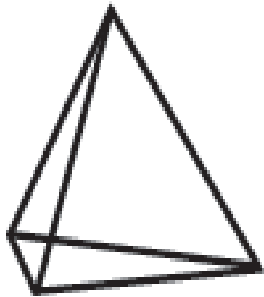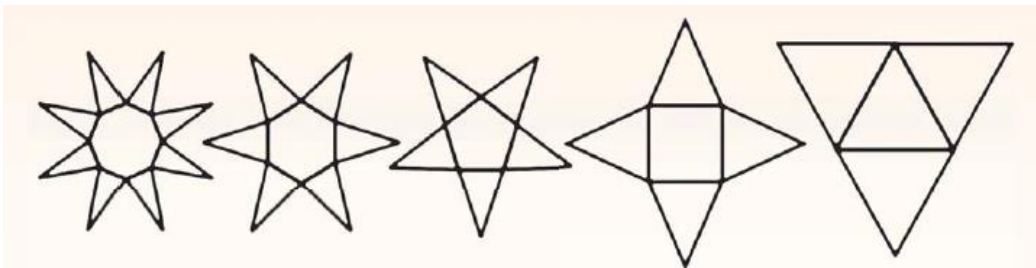
11.1   What is the name of the above 3D object?

_____ (1)

11.2   How many vertices does the object have?

_____ (1)

12   Circle the net that can be folded into a hexagonal pyramid.

A   B   C   D   E   (1)

13   How many lines of symmetry does the following image have?

_____   (1)

14 Answer the questions based on the grid.

	A	B	C	D	E	F	G
1	◊						
2		⬠				☼	
3			▭				
4	▱				○		
5				→			
6		♥					△
7					⬡		

14.1 What is the position of the block where the cylinder can be found?

_____ (1)

14.2 What shape can be found in block G6?

_____ (1)

15 Convert the following:
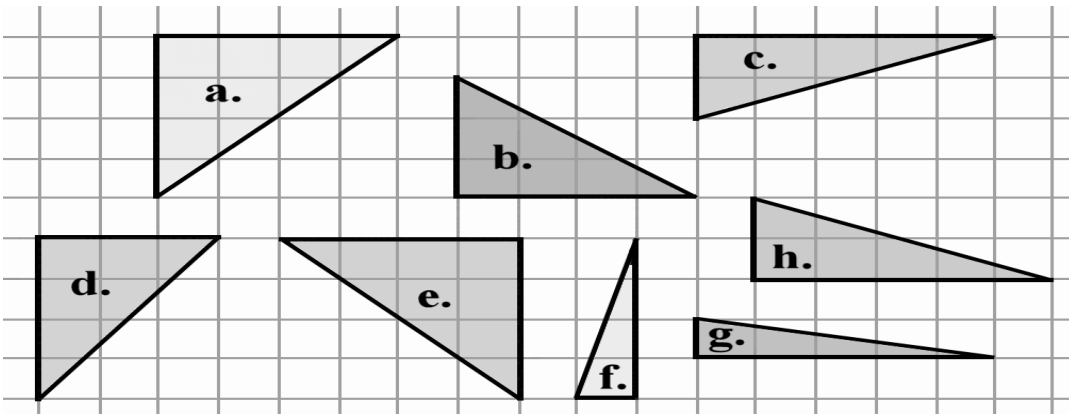
a. $2\frac{1}{2}$ days = _____ hours

b. 41,5 kg = _____ g

(2)

16   Joe had a roll of ribbon that was $8\frac{1}{2}$ m long. He cut off a piece that was 50 cm long
       and sold it for R9. The rest of the roll was sold for R15 per meter. How much money
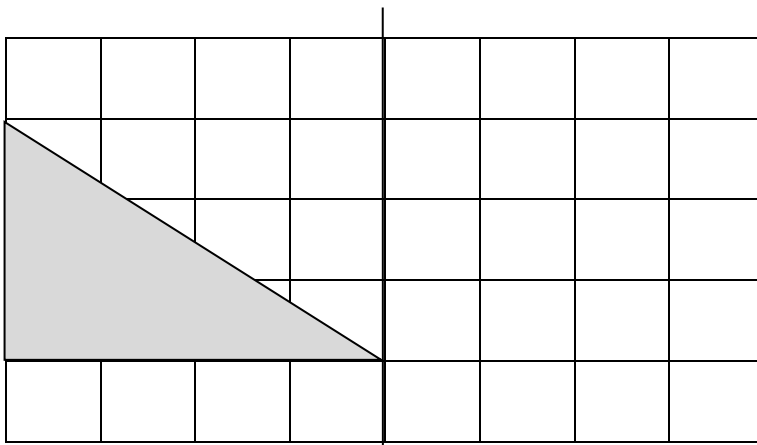   did he get for the entire roll?

(3)

17   Look at the triangles on the grid where each block represents a square that is 1 cm
       by 1 cm:

17.1   What is the area of triangle **a** in square units?

(1)

17.2   Draw a reflection of triangle **b** on the grid provided:
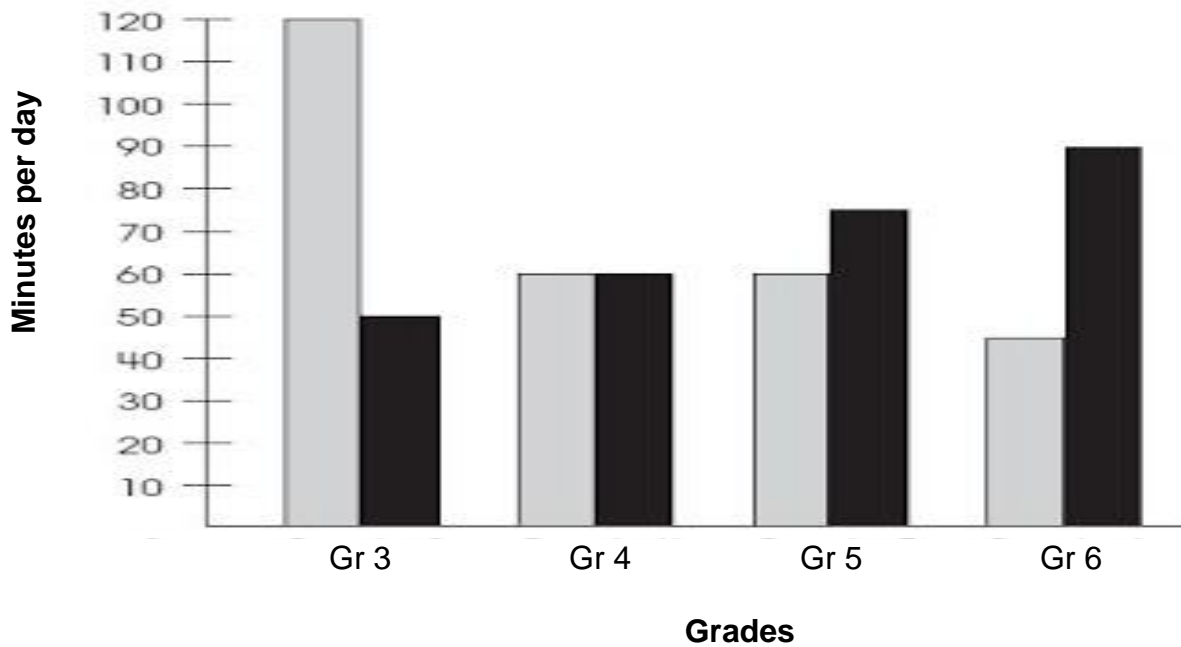

(1)

18   What would the perimeter of an octagon be with all sides measuring 6 cm?

_____

(2)

19   Answer the questions based on the double bar graph showing the number of minutes that students spend on homework and watching television.

Time spent watching television and doing homework

19.1   Which grade spends the most time watching TV?

_____ (1)

19.2   How many more minutes do the grade sixes spend on homework, than the grade threes?

_____ (2)

19.3   Which grade spends an equal amount of time watching TV and doing homework?

_____ (1)

20 Complete the tally table below by filling in the answers to A and B.

Favourite cool-drinks of the Grade 6 class		
Cooldrinks	**Tally**	**Total**
Coke	//// //// //// //// //// //// //// //// //// ////	A
Sprite	B	32

(2)

21 A five-rand coin is tossed. How many possible outcomes are there?

_____ (1)

22 What is the mode for the following set of data?

5 ; 3 ; 3 ; 6 ; 4 ; 3 ; 4 ;3 ;7

_____ (1)

23 Seven teams take part in a soccer league. If each of the teams plays every other team in the league once, how many soccer matches will there be altogether?

(2)

[65]

TOTAL: **75**

END