KULLEĠĠ SAN BENEDITTU
Secondary School, Kirkop

HALF YEARLY EXAMINATION – 2014/2015

Level 6 – 7

YEAR 8	**MATHEMATICS** Level 6 - 7	TIME: 30 mins

Non Calculator Paper

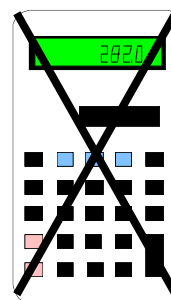| Question	1	2	3	4	5	6	7	NC
Max. Mark	7	3	4	3	2	2	4	25
Mark								

DO NOT WRITE ABOVE THIS LINE

NAME AND SURNAME: _____   CLASS:_____

INSTRUCTIONS TO CANDIDATES:

Read all the questions carefully before you start answering.

- Answer all questions.

- This paper carries 25 marks.

- **Calculators, protractors** and other mathematical instruments are **NOT ALLOWED.**

- On your desk you should have nothing except for **pen, pencil, ruler** and the **examination paper**.

1. a) Write **2 factors** of 35.   Ans: _____ and _____

   b) Write **2 prime numbers** between 10 and 20.

                                              Ans: _____ and _____

   c) From the box choose **all** the numbers which are **multiples of both** 4 and 8.

$$10, \quad 16, \quad 24, \quad 28, \quad 32, \quad 36$$

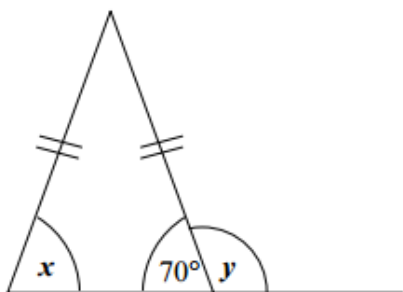   Multiples of 4 and 8 - _____

   d) Find the LCM of 20 and 28.

                                                        LCM = _____

                                                                    (7 marks)

---

2. Find the size of each angle marked with a letter.

                                                        $x =$ _____ °

                                                        $y =$ _____ °

                                                                    (3 marks)

3. Calculate the following. Simplify your answers where possible:

    a) $1 - \dfrac{2}{5} =$

    b) $\dfrac{1}{4} + \dfrac{1}{10} =$

<div align="right">(4 marks)</div>

4. Work out the value of the following expressions, when **x = 2** and **y = –3**.

    a) xy

<div align="right">Ans : _____</div>

    b) $5x - 3y$

<div align="right">Ans : _____</div>

<div align="right">(3 marks)</div>

5. Write down a number that lies between:
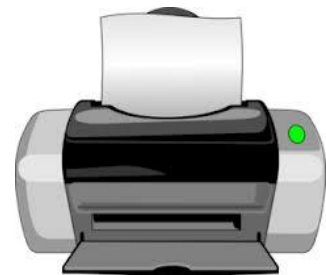
    a) -1 and + 4 = _____

    b) -5 and -4 = _____

(2 marks)

6. A shop offers a 30% **discount** on a printer that is priced €40.

How much does John **save**, when he buys this printer?

Ans : €_____

(2 marks)

7. Kurt is practising for a long jump competition.

His last five jumps were

2.36 m, 2.50 m, 2.46 m, 2.47 m and **2.51 m**.
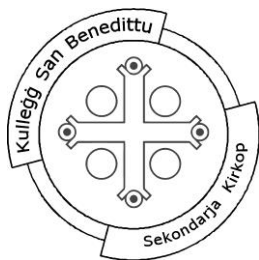
a) What is the **mean** length for these jumps?

Ans: _____ m

b) What is the **median** length for these jumps?

Ans: _____ m

(4 marks)

END OF NON CALCULATOR PAPER

KULLEĠĠ SAN BENEDITTU
Secondary School, Kirkop

HALF YEARLY EXAMINATION – 2014/2015

Level **6 - 7**

YEAR 8   **MATHEMATICS** Level 6 - 7   **TIME: 1hr 30mins**

Main Paper

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	Main	NC	Global Mark
Max. Mark	2	6	5	6	5	3	2	7	6	6	7	10	10	75	25	100
Mark																

DO NOT WRITE ABOVE THIS LINE

NAME AND SURNAME:_____ CLASS:_____

<u>INSTRUCTIONS TO CANDIDATES</u>:

Read all the questions carefully before you start answering.

- Answer all questions.
- This paper carries 75 marks.
- Calculators and mathematical instruments are allowed but all necessary working must be shown.

1. Use your calculator to find the value of:
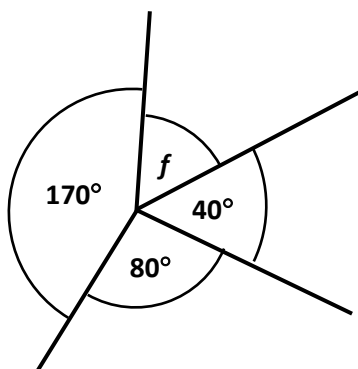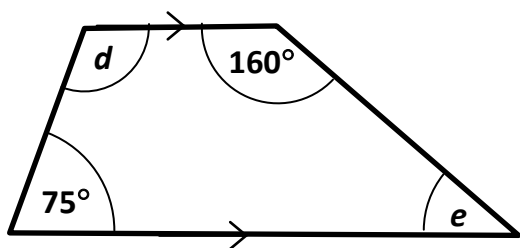
a) $(7 - 3)^3 - 18$

Ans: _____

b) $5^2 + \sqrt{81}$

Ans: _____

(2 marks)

2. Find the value of each lettered angle in the diagram. Show all your **working**.

$d = $ _____ °

$f = $ _____ °

(6 marks)

3. a) Which of these **fractions** are equivalent to $\dfrac{3}{5}$? Circle the correct answers.

$$\dfrac{3}{8} \qquad \dfrac{6}{10} \qquad \dfrac{18}{30} \qquad \dfrac{14}{25}$$

b) Arrange the following fractions in **descending order**.

$$\dfrac{7}{10}, \ \dfrac{11}{15}, \ \dfrac{2}{3}, \ \dfrac{23}{30}, \ \dfrac{3}{5}$$

Ans: _____

(5 marks)

4. a) Write 360 and 240 as a product of their **prime factors**. Give your answer in

index form.

Ans: Prime factors of 360 - _____

Prime factors of 240 - _____

b) A room measures 360 cm by 240 cm. Find the side of the **largest square** tile that can be used to tile the floor, without cutting.

Ans: _____ cm

(6 marks)

5. a) Which of the following is equal to *3a*? Circle the correct answer.
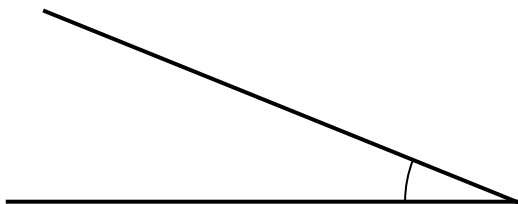
$a + a + a$ $3 + a$ $a \times a \times a$

b) Simplify:

21*g* − 13*h* + 10*g* + 20*h* + 45 = _____

c) Expand the brackets and simplify:

2 (*p* − 2*q* + 5) + 4*p* = _____

(5 marks)

6. a) Measure the angle with your protractor.

°

Ans: _____

b) (i) Draw and mark an angle of 160° at point A.

A

(ii) State whether the angle 160° is acute, obtuse or reflex.

Ans: _____

(3 marks)

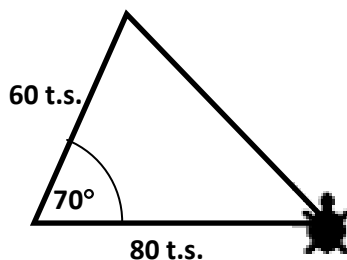7. Fill in the missing **LOGO** command to draw the triangle.

PD

LT 90

FD 80

RT _____

FD _____

HOME

60 t.s.

70°

80 t.s.

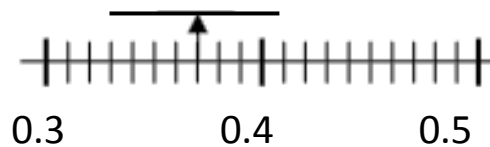(2 marks)

8. a)   (i) Write as **decimals**:

0.511×100 $\dfrac{12}{25}$ $0.82 \div 10$ $\dfrac{300}{800}$

_____   _____   _____   _____

(ii) Put the numbers in (i) in order of size, **smallest** first.

_____   _____   _____   _____

b) On this number line, fill in the number shown by the arrow.

0.3   0.4   0.5

(7 marks)

9. a) A girl spends $\frac{1}{5}$ of her pocket money on sweets and $\frac{2}{3}$ on records.

   i) What fraction has she **spent**?

   Ans: _____

   ii) What fraction has she **left**?

   Ans: _____

   b) An airline charges €580 for a return flight to San Francisco.

   The fare **increases** by 8%. Work out the **new** fare.

   Ans: €_____

   (6 marks)

10. a) i) Work out a **rough estimate** of the following calculation:

$$\frac{63.2 \times 0.029}{11.6} \approx$$

Ans: _____

ii) Work out the above calculation using your **calculator.**

Give your answer correct to **2 decimal places**.

Ans: _____

b) Alexia is paid €35 for working 9 hours.

Calculate Alexia's **hourly pay rate**. Round your answer to the **nearest euro**.

Ans: €_____

(6 marks)

11. a) Find the **mean** and the **range** of these numbers:

$$5, 5, 6, 7, 7, 8, 8, 8, 9$$

Mean: _____   Range: _____

b) Paul says that **both the median and the mode are 8**. Victor disagrees.

i) Who is right?   _____ is right.

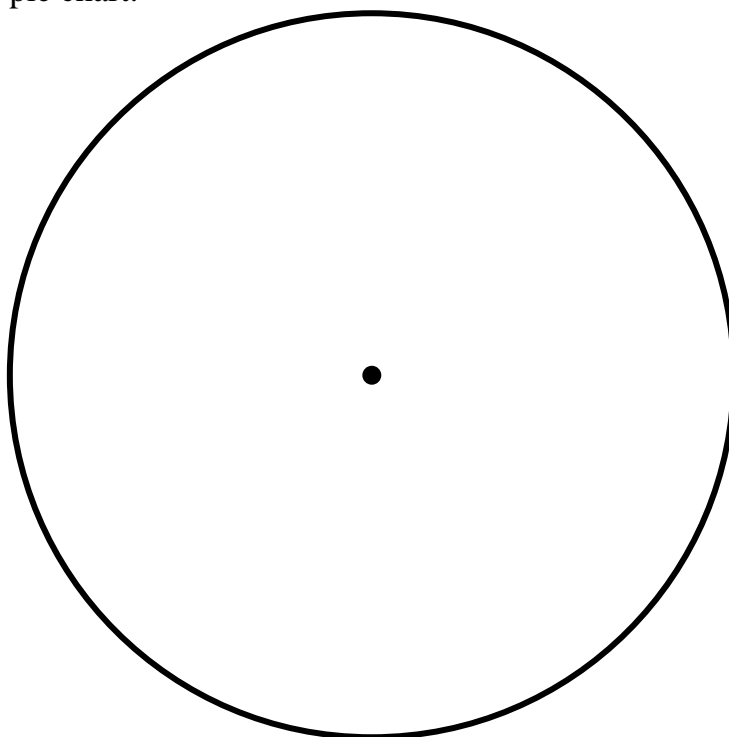ii) Give clear reasons for your answer.

(7 marks)

12. One day Alan recorded the ages of the people attending the gym.

| 21 | 29 | 22 | 28 | 24 | 25 |
| 38 | 31 | 28 | 24 | 26 | 29 |

a) Complete Alan's **frequency table** from the given data.

Age (in years)		Frequency	Angle in Pie Chart
At least	**Below**		
20	25		
25	30		
30	35		
35	40		
	Total	12	360°

b) Draw a **pie chart** to illustrate the data obtained in the frequency table.
   Label the pie chart.

(10 marks)

13. Martin buys a smart phone priced at **€300**. First he pays a deposit of **35%**.

a) How much deposit does he pay?

Ans: €_____

b) Martin then makes **12 monthly** payments of €**20** each. How much do these payments add up to?

Ans: €_____

c) How much does Martin **really** spend to buy this smart phone?

Ans: €_____

d) What is the **extra** amount of money that Martin pays for his smart phone?

Ans: €_____

e) Express the amount of money that Martin pays **extra**, as a **percentage** of the **original** price of the smart phone.

Ans: _____ %

f) **Underline** the correct answer.

Your answer in (e) shows the:

DEPOSIT RATE   INTEREST RATE   DISCOUNT RATE

(10 marks)

END OF MAIN PAPER