This is a Class 1 exam

Lebanon Evangelical School
for Boys and Girls
Loueizeh - Baabda

Stage Exam 02

26MAR2025

Do NOT write in this box. Your MARK will be placed here.

Subject :	Maths
Class :	7E
Teacher :	Mr. Mohammed Assaf
Duration :	1 hour

Calculators are NOT allowed

You are to answer the questions to this exam on : Squared paper

Your name :		*Time taken to complete exam*
Your Class :		
Exam Room :		
How many sheets, including cover sheet :		

- Do not open this paper until the teacher in charge instructs you to do so.
- The most important thing to remember in taking an exam is NEVER PANIC.
- If you are caught cheating in this exam, you will be awarded zero for ALL exams that are taken on this day.

Write all your solutions neatly on a separate paper unless stated otherwise. Show your work.

Calculators are NOT allowed.

I. For each question, indicate the right answer. [5 points]

No.	Questions	Answer A	Answer B	Answer C
1	The fraction $\frac{171}{225}$ is ...	an irreducible fraction	a reducible fraction	equal to $\frac{172}{226}$
2	IJK is an equilateral triangle, then:	IJ = IK only	IK = IJ only	IJ = IK = JK
3	$\frac{6+3}{9+3} = \ldots$	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{6-3}{9-3}$
4	In a triangle ABC, the height issued from the vertex C	is perpendicular to (AB)	cuts the side [AC] at its midpoint	cuts the side [AB] at its midpoint
5	$1 \div \frac{1}{3} =$	$\frac{1}{3}$	1	3

II. Perform the following: [4 points]

1) $\frac{5}{8} - \frac{2}{6} + \frac{5}{24}$

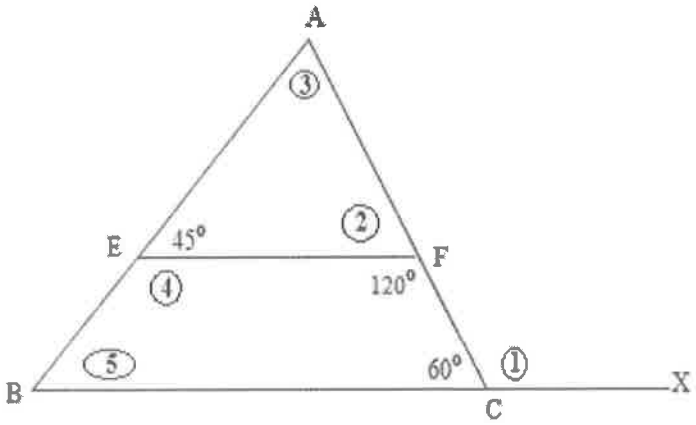
2) $\frac{2}{3} \times \frac{10}{4} - 2$

3) $(\frac{1}{3}) \div (\frac{2}{3})$

4) $\frac{3 \times 5^2 \times 7^3}{3^2 \times 5^3 \times 7^2}$

III. Consider the triangle ABC below:

Calculate the angles 1, 2, 3, 4 and 5 (in circles). [5 points]



IV. 1- Reduce the fraction $\frac{105}{175}$ by applying successive divisions to 105 and 175. [1 point]

2- Let *d* be the G.C.F of 105 and 175.

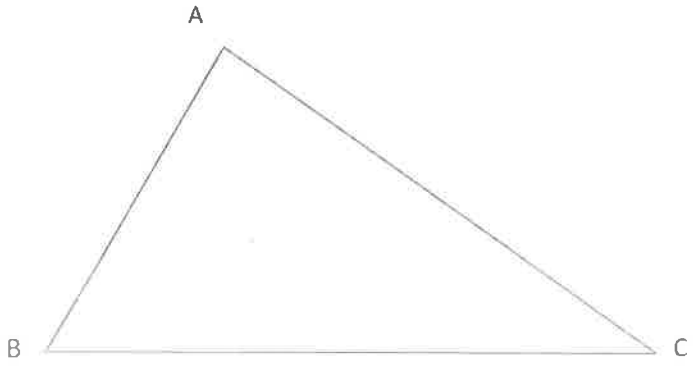
a) Calculate *d*. [2 point]

b) Determine: $\frac{105 \div d}{175 \div d}$. [1 point]

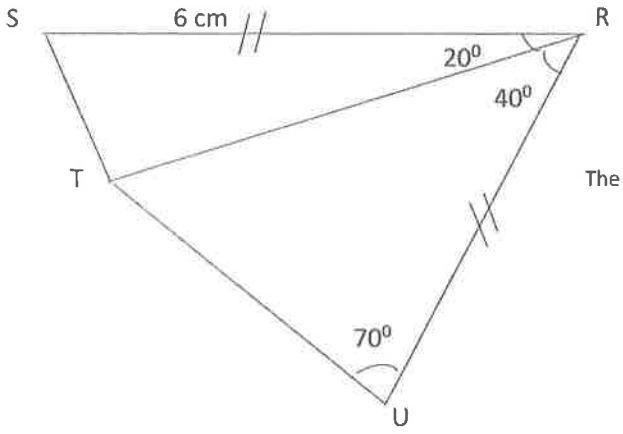
c) What can you say about the obtained fraction? [1 point]

V. Construct the perpendicular bisector of [AC], the height [AH] and the bisector issued from vertex B in the following triangle. [3 points]

(Do the construction on the question sheet. Show all the steps of construction).



VI. Consider the following figure:



The figure is not accurately drawn

1- Write the given of the coded figure above. [2 points]

2- a) Prove that triangle RTU is isosceles. [3 points]

b) Deduce that triangle RST is isosceles. [2 points]

c) Find the measure of $\widehat{RST}$ and $\widehat{RTS}$.

(1 point for clearness of the exam)

Good job ☺

Correction of SE02/Maths *Date:Tuesday, Mar 18 th, 2025*

Grade 7E *Done by: Mr.M.Assaf*

I. 1) $\frac{171}{225}$ is a reducible fraction since 171 and 225 can be divided by 3. Answer is B. 1 point

2) IJ = IK = JK (Properties of an equilateral triangle). Answer is C: IJ = IK = JK 1 point

3) $\frac{6+3}{9+3} = \frac{9 \div 3}{12 \div 3} = \frac{3}{4}$. Answer is B: $\frac{3}{4}$ 1 point

4) Answer is A: is perpendicular to (AB) 1 point

5) $1 \div \frac{1}{3} = \frac{1}{1} \times \frac{3}{1} = 3$. Answer is C: 3 1 point

II. 1) $\frac{5}{8} - \frac{2}{6} + \frac{5}{24} = \frac{15}{24} - \frac{8}{24} + \frac{5}{24} = \frac{15-8+5}{24} = \frac{12}{24} = \frac{1}{2}$ 1 point

2) $\frac{2}{3} \times \frac{10}{4} - 2 = \frac{2 \times 10}{3 \times 4} - 2 = \frac{20}{12} - 2 = \frac{20}{12} - \frac{2}{1} = \frac{20}{12} - \frac{2 \times 12}{1 \times 12} = \frac{20-24}{12} = \frac{-4}{12} = \frac{-1}{3}$ 1 point

3) $(\frac{1}{3}) \div (\frac{2}{3}) = \frac{1}{3} \times \frac{3}{2} = \frac{1 \times 3}{3 \times 2} = \frac{1}{2}$ 1 point

4) $\frac{3 \times 5^2 \times 7^3}{3^2 \times 5^3 \times 7^2} = \frac{7}{3 \times 5} = \frac{7}{15}$ (subtraction of powers) 1 point

III. Angle 1 = $180^0 - 60^0 - 120^0$ (supplcmcntary angles). 1 point
Angle 2 = $180^0 - 120^0 = 60^0$ (supplementary anglcs). 1 point
Angle 3 = $180^0 - (60^0 + 45^0) = 75^0$ (sum of angles in a triangle). 1 point
Angle 4 = $180^0 - 45^0 = 135^0$ (supplementary angles). 1 point
Angle 5 = $180^0 - (60^0 + 75^0) = 45^0$ (sum of angles in a triangle). 1 point

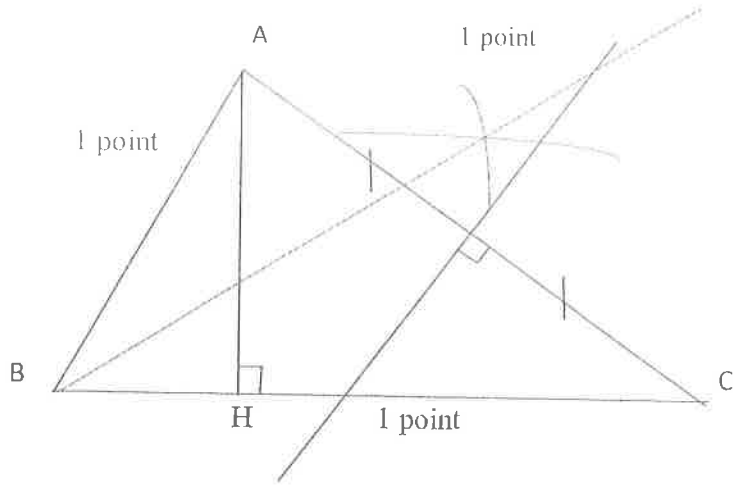
IV. 1- $\frac{105}{175} = \frac{105 \div 5}{175 \div 5} = \frac{21 \div 7}{35 \div 7} = \frac{3}{5}$ 1 point

2- a) $105 = 3 \times 5 \times 7$; $175 = 5 \times 5 \times 7$; then $d = 5 \times 7 = 35$ 2 points

b) $\frac{105 \div d}{175 \div d} = \frac{3}{5}$ 1 point

c) We can say that it is an irreducible fraction. 1 point

V.



VI. 1- RS = RU = 6 cm ; $\widehat{SRT} = 20^0$; $\widehat{TRU} = 40^0$; $\widehat{TUR} = 70^0$. 2 points

2- a) R.T.P: RTU is an isosceles triangle

Proof:

$\widehat{RTU} = 180^0 - (\widehat{TRU} + \widehat{RUT})$ (sum of angles in a triangle) 1 point

$= 180^0 - (40^0 + 70^0)$

$= 70^0$ 1 point

Then, $\widehat{RTU} = \widehat{RUT} = 70^0$; Therefore, RTU is an isosceles triangle of base [TU]. 1 point

b) RT = RU (equal sides in an isosceles triangle). 1 point

But RU = RS (given) 1 point

Then, RS = RT and the triangle RST is then isosceles of base [ST].

c) RST is an isosceles triangle → $\widehat{RST} = \widehat{RTS}$ (properties of an isosceles triangle).

$\widehat{RST} + \widehat{TRS} + \widehat{RTS} = 180^0$ (sum of angles in a triangle).

$\widehat{RST} + 20^0 + \widehat{RTS} = 180^0 \rightarrow \widehat{RST} + \widehat{RTS} = 160^0$

Now, $2\widehat{RST} = 160^0 \rightarrow \widehat{RST} = 80^0 = \widehat{RTS}$.