This is a Class 1 exam

Lebanon Evangelical School
for Boys and Girls
Loueizeh - Baabda

Stage Exam 05
27APR2026

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

Subject :	Maths
Class :	7E
Teacher :	Rami Bou Karroum
Duration :	1 hour
Write all of your solutions neatly on this 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 **This paper**.

Show your steps. Calculators are not allowed.

I- Simplify the following. (4.5 points)

1°) $3a^2 \times 4a^5 =$ .....

2°) $6x^4 \times (-2x) =$.....

3°) $-\frac{3y^2}{5} \times \frac{10y}{3} =$ .....

II- Given A = $3x^3 - 5x^2 + 2x - 2$ and B = $2x^3 - 2x^2 + 5x - 3$ (5 points)

a) Calculate A + B

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b) Calculate 2A – B

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III- Simplify (5.5 points)

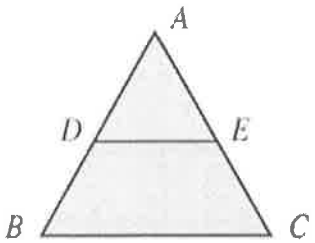
$A = \left(\frac{2}{3} \div \frac{5}{6}\right) \times \left(\frac{3}{4} \times \frac{1}{2}\right)$

$B = \frac{3}{5} - \frac{12}{8} \div \left(\frac{3}{2} + 2\right)$

$C = 1 - \left(2^2 + \frac{3}{2}\right) \div \left(3 + \frac{2}{3}\right)$

IV- In the figure below, (DE) is parallel to (BC), $\widehat{ADE}$ = 40° and $\widehat{ACB}$ = 40°. (3 points)

1) Calculate $\widehat{AED}$ and $\widehat{ABC}$.



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2) Show that triangle ABC is isosceles.

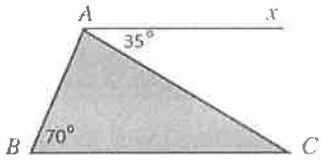
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V- In the figure below, [Ax) is parallel to [BC], $\widehat{CAx}$ = 35°and $\widehat{ABC}$ = 70°. (2 points)

Calculate $\widehat{BAC}$.



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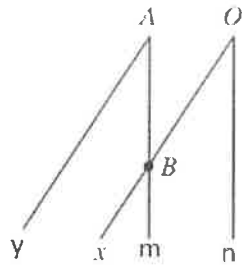
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VI- $\widehat{yAm}$ and $\widehat{xOn}$ are two angles such that:

[Ox) and [On) are parallel to [Ay) and [Am) respectively.

[Am) and [Ox) intersect at B.

Prove that $\widehat{mAy} = \widehat{xOn}$ (5 points)



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Write all your solutions **neatly** on **This paper**.

Show your steps. Calculators are not allowed.

I- Simplify the following. (4.5 points)

1°) $3a^2 \times 4a^5 =$ ....$12a^7$.....

2°) $6x^4 \times (-2x) =$ ....$-12x^5$.....

3°) $-\frac{3y^2}{5} \times \frac{10y}{3} =$ ....$-2y^3$.....

1.5 each

II- Given A = $3x^3 - 5x^2 + 2x - 2$ and B = $2x^3 - 2x^2 + 5x - 3$ (5 points)

a) Calculate A + B

$3x^3 - 5x^2 + 2x - 2$

$+ 2x^3 - 2x^2 + 5x - 3$

$= 5x^3 - 7x^2 + 7x - 5$

0.5 0.5 0.5 0.5

b) Calculate 2A – B

$2(3x^3 - 5x^2 + 2x - 2) - (2x^3 - 2x^2 + 5x - 3)$

1 $= 6x^3 - 10x^2 + 4x - 4 - 2x^3 + 2x^2 - 5x + 3$ 1

$= 4x^3 - 8x^2 - x - 1$

1

III- Simplify (5.5 points)

$A = \left(\frac{2}{3} \div \frac{5}{6}\right) \times \left(\frac{3}{4} \times \frac{1}{2}\right)$

$\left(\frac{2}{3} \times \frac{6}{5}\right) \times \left(\frac{3}{4} \times \frac{1}{2}\right)$ (0.5) (0.5) (0.5)

$= \frac{4}{5} \times \frac{3}{8} = \frac{12 \div 4}{40 \div 4} = \frac{3}{10}$

OR $\frac{4}{5} \times \frac{3}{8_2} = \frac{3}{10}$

$B = \frac{3}{5} - \frac{12}{8} \div \left(\frac{3}{2} + \frac{2}{1\times 2}\right) \times 2$

$= \frac{3}{5} - \frac{12}{8} \div \left(\frac{3}{2} + \frac{4}{2}\right)$ (0.5)

$= \frac{3}{5} - \frac{12^3}{8_4} \times \frac{2}{7} = \frac{3 \times 7}{5 \times 7} - \frac{3 \times 5}{7 \times 5} = \frac{21}{35} - \frac{15}{35} = \frac{6}{35}$ (0.5) (0.5)

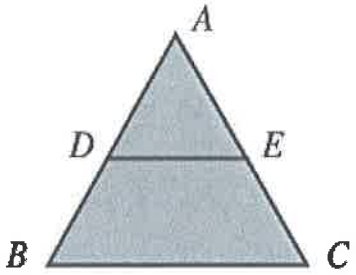
$C = 1 - \left(2^2 + \frac{3}{2}\right) \div \left(3 \times \frac{2}{3}\right)$

$= 1 - \left(\frac{4 \times 2}{1 \times 2} + \frac{3}{2}\right) \div \left(\frac{9}{3} + \frac{2}{3}\right)$ (0.5) (0.5)

$= 1 - \frac{11}{2} \div \frac{11}{3} = 1 - \frac{11}{2} \times \frac{3}{11} = \frac{1 \times 2}{1 \times 2} - \frac{3}{2} = \frac{2}{2} - \frac{3}{2} = -\frac{1}{2}$ (0.5) (0.5)

IV- In the figure below, (DE) is parallel to (BC), $\widehat{ADE}$ = 40° and $\widehat{ACB}$ = 40°. (3 points)

1) Calculate $\widehat{AED}$ and $\widehat{ABC}$.



(0.5)

(DE) // (BC) → $\hat{AED} = \hat{ADE} = 40°$ (0.5)

$\hat{ABC} = \hat{ACB} = 40°$ (0.5)

corresponding angles are equal.

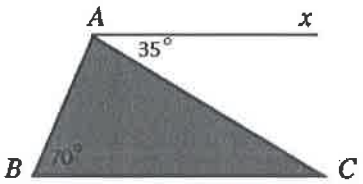
(0.5)

2) Show that triangle ABC is isosceles.

since $\hat{ABC} = \hat{ACB}$ (0.5), ΔABC is isosceles having 2 base angles equal. (0.5)

V- In the figure below, [Ax) is parallel to [BC], $\widehat{CAx}$ = 35°and $\widehat{ABC}$ = 70°. (2 points)

Calculate $\widehat{BAC}$.



(0.5)

[Ax) // (BC) → $\hat{ACB} = \hat{CAx} = 35°$ (0.5) (0.5) (alternate interior angles are equal)

Angle sum in ΔABC: $\hat{BAC} = 180° - (35 + 70)$

$= 180 - 105 = 75°$

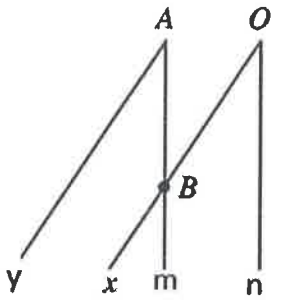
(0.5)

VI- $\widehat{yAm}$ and $\widehat{xOn}$ are two angles such that:

[Ox) and [On) are parallel to [Ay) and [Am) respectively.

[Am) and [Ox) intersect at B.

Prove that $\widehat{mAy} = \widehat{xOn}$ (5 points)



$[Ox) \parallel [Ay)$ and $[On) \parallel [Am)$ (1)

$\Rightarrow$ (1) $\hat{yAm} = \hat{ABO}$ } alternate interior angles are

(1) $\hat{xOn} = \hat{ABO}$ } congruent (equal) (1)

by comparison, $\hat{yAm} = \hat{xOn}$

(1)