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KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

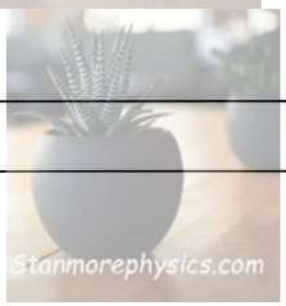
GENERAL EDUCATION AND TRAINING (GET)

GRADE 8

MATHEMATICS

2025 UGU DISTRICT TERM 3 TEST

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NAME OF SCHOOL: _____

LEARNER NAME: _____

MARKS OBTAINED _____%

DURATION: 1,5 HOURS

MARKS: 60

Instructions to candidates

1. This paper consists of **TWO** sections, A and B.
2. Section A items are multiple choice type (MCQ). In order to respond to items in this section, you have to circle the letter corresponding to the correct answer.
3. Section B items are open ended and free response question types. **Use the spaces provided to respond to items in this section.**
4. NB. This question paper consists of **8 pages including the cover page.**

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SECTION A

QUESTION 1 [5]

Answer the following questions by choosing the correct answer. **Circle the letter next to the correct answer.**

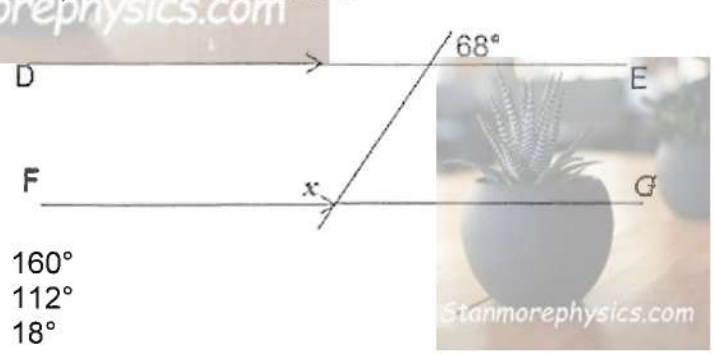
1.1 $5(-x-1) =$ (1)

A. $-5x+5$
B. $5x-1$
C. $-5x-5$
D. $5x+5$

1.2 If $3x-7=5$, then... (1)

A. $x=10$
B. $x=4$
C. $x=2$
D. $x=3$

1.3 If DE//FG, then the value of x **is** (1)



A. 160°
B. 112°
C. 18°
D. 60°

1.4 Which of the following properties define a right-angled triangle? (1)

A. One pair of adjacent sides equal and two equal angles.
B. All sides and three interior angles equal.
C. One pair of perpendicular sides.
D. Neither angles nor sides are equal

1.5 One of the following properties defines a kite. (1)

A. Four equal sides and two pairs of opposite parallel sides
B. Two pairs of opposite sides parallel and four right angles
C. Two pairs of opposite sides parallel and opposite angles congruent.
D. Two pairs of adjacent sides equal and one pair of opposite angles equal

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QUESTION 2 **[13]**

Simplify the following expressions:

2.1 $2a\,(3a + b) - 3a\,(2a + 4b)$ (3)

2.2 $4x^3 \times (2x)^4$ (2)

2.3 $\dfrac{(3x)^2 - 12xy^2}{-3xy}$ (3)

2.4 $\dfrac{\sqrt{\sqrt{81 - 49 \times 17^0}}}{\sqrt[3]{8}}$ (3)

2.5 If $a = -2$, $b = -4$ and $c = 6$, evaluate this expression: $\dfrac{abc}{b}$ [2]

QUESTION 3 **[12]**

3.1 Complete the value of a; b and c if: $y = -2x + 1$ (3)

x	−3	−2	−1	0	1	**c……**	3
y	7	**a…….**	3	1	**b……**	−3	−5

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3.2 Solve $\frac{1}{2}x - 7 = 15$ (3)

3.3 Solve $x^3 = 125$ (2)

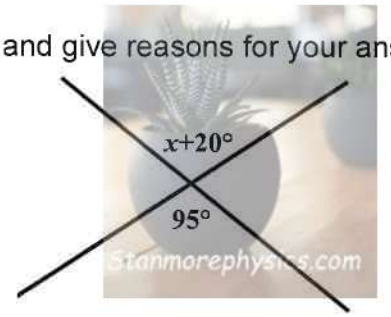
3.4 Solve $\frac{(2^2 \times 3^2) \times 5^2}{12^2 \times 2^4}$ (3)

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QUESTION 4 **[13]**

4.1 Calculate the value of x or y and give reasons for your answers

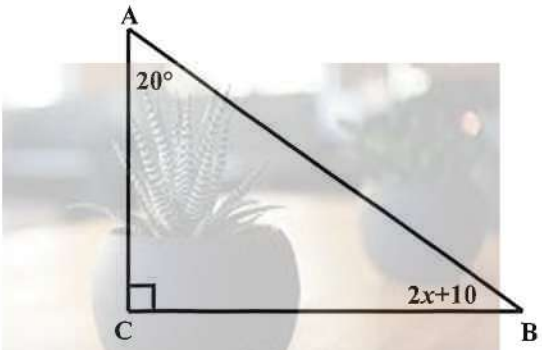
4.1.1 (2)



STATEMENT	REASON

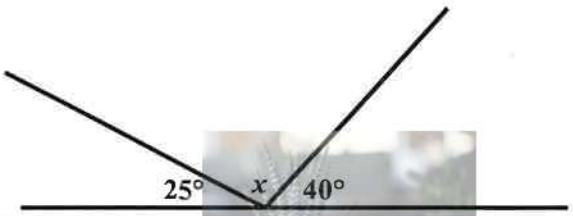
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4.1.2 (2)



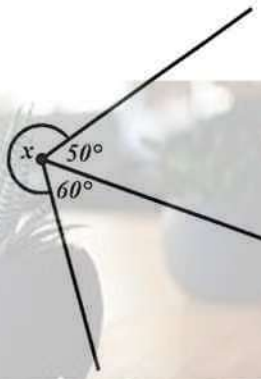
STATEMENT	REASON

4.1.3 (2)



STATEMENT	REASON

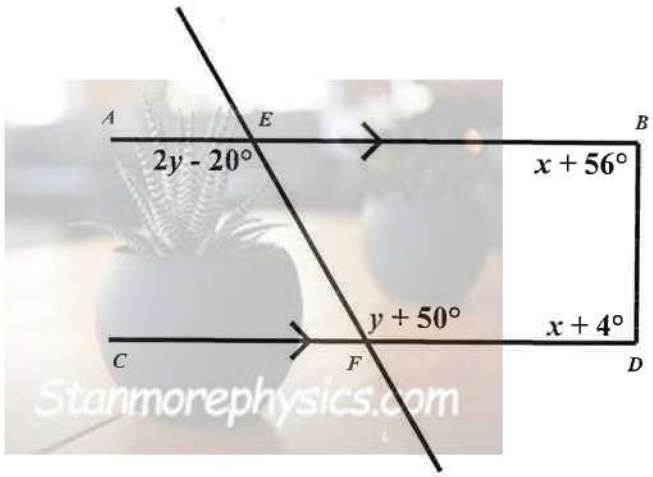
4.1.4 (3)



STATEMENT	REASON

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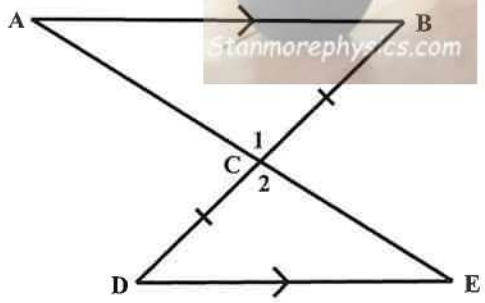
4.1.5 (4)



STATEMENT	REASON

QUESTION 5 **[17]**

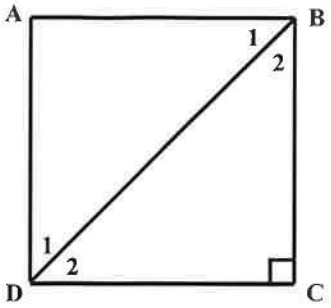
5.1 AB // DE. Fill in the missing spaces. (4)



STATEMENT	REASON
$\hat{B} = \hat{D}$	Alt angles, AB//DE
.....	.....
CD = BD	Given
Therefore Δ ..... ≡ ΔEDC	.....

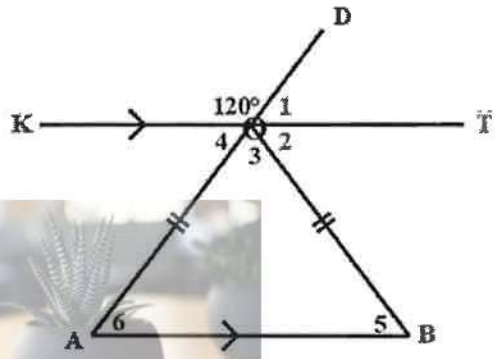
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5.2 ABCD is a square. The area of triangle ABD = 2 cm^2.



What is the length of BC? (3)

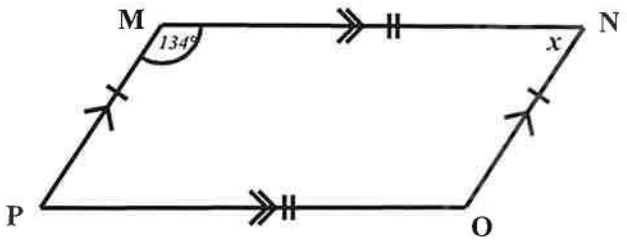
5.3 In triangle OAB, OB = OA. KT//AB.



What type of a triangle is triangle ABO? Justify your answer. (3)

STATEMENT	REASON

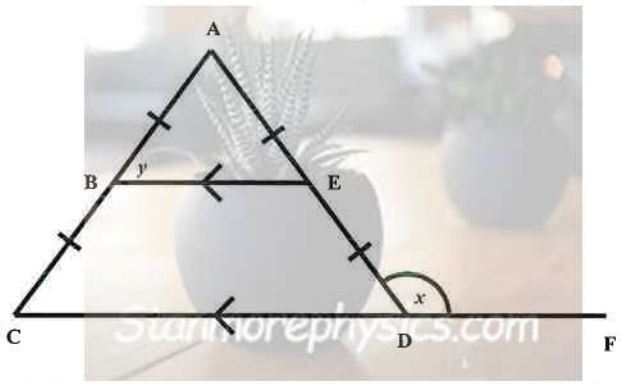
5.4 MNOP is a parallelogram. Determine the value of x. (3)



STATEMENT	REASON

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5.5 Study the triangles below and answer the questions.



Triangle ACD is an isosceles triangle. BE bisects AC at B and BE bisects AD at E. AC = AD and BE//CF.

5.5.1 What is the name of quad BCDE? (2)

5.5.2 Evaluate: $x + y$ (2)

STATEMENT	REASON

GRAND TOTAL: 60 MARKS

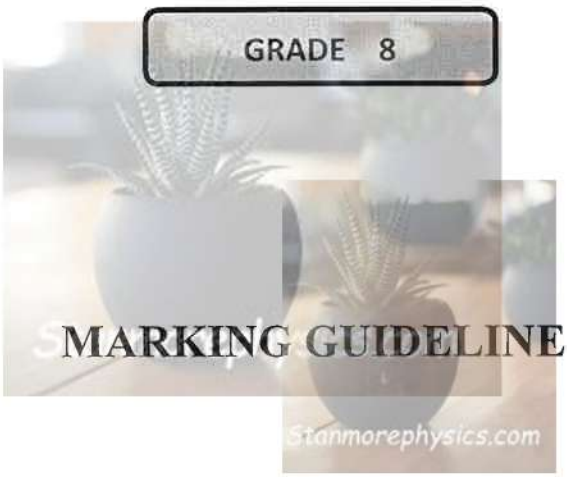
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GRADE 8



DURATION: 1 Hour 30min

MARKS: 60

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Question 1			**[5]**
1.1	C ✓		
1.2	B✓		
1.3	B ✓		
1.4	C✓		
1.5	D ✓		
Question 2			
2.1.	$2a\,(3a + b) - 3a\,(2a + 4b)$ $= 6a^2+2ab - 6a^2 - 12ab$ ✓ $= 6a^2-6a^2 +2ab -12ab$ ✓ $= -10ab$ ✓		(3)
2.2.	$4x^3 \times (2x)^4$ $= 4x^3 \times 16x^4$✓ $= 64x^7$✓	*1 mark for $16x^4$* *1 mark for = $64x^7$*	(2)
2.3.	$\frac{(3x)^2y-12xy^2}{-3xy}$ $\frac{9x^2y-12xy^2}{-3xy}$✓ $= \frac{9x^2y}{-3xy} - \frac{12xy^2}{-3xy}$✓ $= \frac{3x(3x-4y^2}{-3xy}$ $= \frac{4y^2-3x}{y}$✓		(3)
2.4.	$\sqrt{\frac{\sqrt{81-49\times 17^0}}{\sqrt[3]{8}}}$ $= \sqrt{\frac{\sqrt{81-49\times 1}}{2}}$ $= \sqrt{\frac{\sqrt{81-49}}{2}}$ $= \sqrt[4]{\frac{81-49}{2}}$✓ $= \frac{\sqrt[4]{32}}{2}$ ✓ $= \frac{\sqrt[4]{2}}{2}$ $= \sqrt[4]{2}$ ✓		(3)
2.5.	If $a = -2$, $b = -4$ and $c = 6$, find the value of these expression $\frac{abc}{b}$		(2)
	$= \frac{-2\times-4\times 6}{-4}$ ✓ $=-12$ ✓	OR $\frac{a\cancel{b}c}{\cancel{b}}$ ✓ $= -2 \times 6$ $=-12$ ✓	

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Question 3

3.1. (3)

$\frac{1}{2}x = 15 + 7$

x	-3	-2	-1	0	1	c=2✓	3
y	7	a=5✓	3	1	b= −1✓	-3	-5

3.2. (3)

$\frac{1}{2}x - 7 = 15$

$\frac{1}{2}x = 15 + 7$ ✓

$\frac{1}{2}x = 22 \times 2$ ✓

$x = 44$✓

3.3 (2)

$x^3 = 125$

$x = \sqrt[3]{125}$✓

$x = 5$ ✓

3.4. (3)

$\frac{(2^2.3^2)\times 5^2}{12^2 \times 2^4}$

$= \frac{36\times 25}{36\times 4\times 16}$✓✓ or $\frac{36\times 25}{144\times 16}$ or $\frac{900}{2304}$

$= \frac{25}{64}$✓

1 mark for 36×25
1 mark for $36 \times 4 \times 16$
1 mark for the correct answer

Question 4

4.1.1 (2) +1

Statement	Reason
$x + 20° = 95°$ ✓	Vert. opp ∠'s ✓
$x = 95° - 20°$	
$x = 75°$✓	

4.1.2. (2)

Statement	Reason
$2x + 10° + 20° + 90° = 180°$	Sum of the angles of a triangle✓
$2x = 180° - 120°$	
$x = 30°$✓	

4.1.3 (2)

Statement	Reason
$25° + x + 40 = 180°$	Adjacent angles on a straight line✓
$x = 180° - 65°$	
$x = 115°$✓	

4.1.4 (3)

Statement	Reason
$x + 60 + 50° = 360°$✓	Angles around a point/revolution ✓
$x = 360° - 110°$	
$x = 250°$✓	

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4.1.5 (4)

Statement	Reason
$x + 56° + x + 4° = 180°$	Co-interior angles, AB//CD ✓
$2x + 60° = 180°$	
$x = 60°$✓	
$2y - 20° = y + 50°$	Alt. Angles, AB//CD ✓
$2y - y = 50° + 20°$	
$y = 70°$✓	

Question 5

5.1. (4)

Statement	Reason
$\hat{B} = \hat{D}$	Alt. angles, AB//DE
$\hat{A} = \hat{E}$ ✓ / $\hat{C}_1 = \hat{C}_2$	Alt. angles, AB//DE ✓ vert opp ∠s
CD = CB	Given
Therefore $\Delta ABC \equiv \Delta EDC$✓	AAS✓ / SAA

5.2 (3)

Statement	Reason
Area of ABCD = 2 (*Area* of ΔABD)=4 cm²	A diagonal of a square bisects a square✓
BD^2= 4 cm²	Side squared✓
BD= $\sqrt{4\ cm^2}$	
BD= 2 cm✓	

5.3 (3)

Statement	Reason
~~$\hat{A} = K\hat{O}A = 60°$~~	~~alt. angles, KT//AB ✓~~
~~$\hat{A} = \hat{B}$~~	angles opp. = sides ✓
~~$\hat{A} + \hat{B} + A\hat{O}B = 180°$~~	~~Sum of the interior angles of a triangle~~
~~$A\hat{O}B = 60°$~~	
~~ΔABO is an equilateral triangle~~	~~$\hat{A} = \hat{B} = A\hat{O}B$✓~~ ✓
Isoscele Δ ✓	two sides are = opp ∠ are = ✓

5.4 (3)

Statement	Reason
$x = 180° - 134°$ ✓	Co-interior angles, MP//NO ✓
$x = 46°$✓	
134 = 360° ∠s of a par	

5.5 **5.5.1** (2)

Statement	Reason
BC= ED	Given✓
BE //CD	Given
BCDE is a trapezium✓	One pair of opposite sides parallel

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	5.5.2	**Statement**	**Reason**	(2)
		~~$\hat{A} = 60°$~~		
		$y + A\hat{E}B = 120°$	Angles opposite = sides	
		$y = 60°$ ✓		
		$\hat{A} = \hat{C} = 60°$		
		$x = \hat{A} + \hat{C} = 120°$	Exterior angle of a Δ	
		$y + x = 180°$ ✓		

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OR $x = y + 180 - y$

$x + y = 180°$

