



KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

**MATHEMATICS SBA TASK
TERM 3 COMMON ASSESSMENT
28 AUGUST 2026
MARKING GUIDELINE**

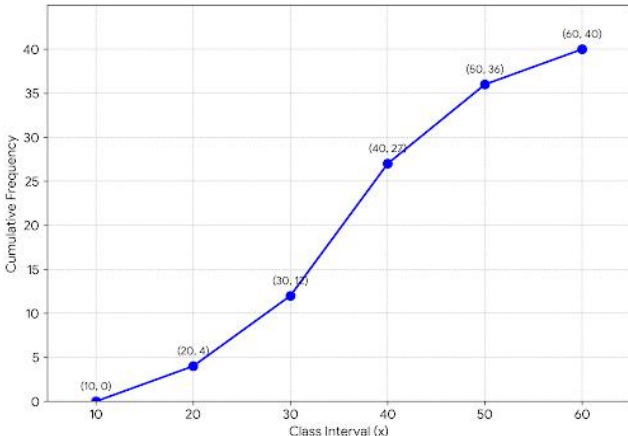
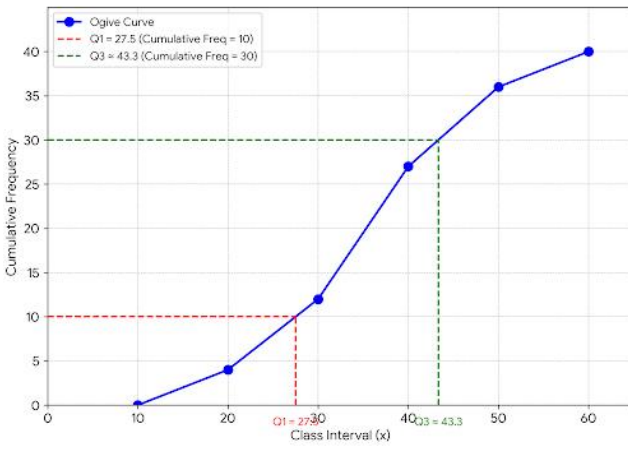
MARKS: 50

These marking guidelines consist of 6 pages.

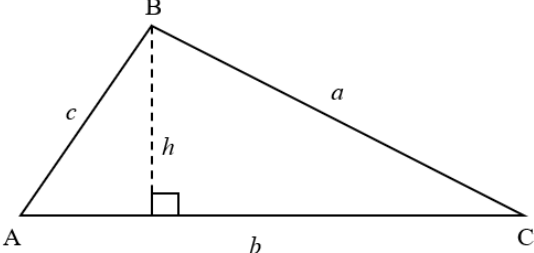
QUESTION 1

1.1	Mean $\bar{x} = \frac{310}{11} = 28,18$ Answer only: FULL MARKS	✓ A $\frac{310}{11}$ ✓ CA 28,18	(2)
1.2	Median $Q_2 = 26$	✓ A $Q_2 = 26$	(1)
1.3	$Q_1 = 20$ $Q_3 = 33$ $IQR = 33 - 20 = 13$	✓ A $Q_1 = 20$ ✓ A $Q_3 = 33$ ✓ CA $IQR = 13$	(3)
1.4	Standard deviation $\sigma = 11,25$ Interval: $[\bar{x} - \sigma; \bar{x} + \sigma] = [16,93; 39,43]$ 9 scores fall within this interval	✓ A $\sigma = 11,25$ ✓ A $[16,93; 39,43]$ ✓ CA 9 scores	(3)
1.5	Upper Boundary = $Q_3 + 1,5(IQR)$ Upper Boundary = $33 + 1,5(13)$ Upper Boundary = 52,5 Since $58 > 52,5$, 58 is an outlier	✓ A $33 + 1,5(13)$ ✓ A 52,5 ✓ CA conclusion	(3)
[12]			

QUESTION 2

2.1	$A = 4$ $B = 27$	✓ A $A = 4$ ✓ A $B = 27$	(2)
2.2	$30 \leq x < 40$	✓ A $30 \leq x < 40$	(1)
2.3	$\bar{x}_{est} = \frac{\sum(f \cdot x)}{\sum f}$ $\bar{x}_{est} = \frac{4 \times 15 + 8 \times 25 + \dots + 4 \times 55}{40}$ $\bar{x}_{est} = \frac{1410}{40}$ $\bar{x}_{est} = 35,25$	✓ A using midpoints of class intervals (15; 25;...;55) ✓ A denominator ✓ CA 35,25	(3)
2.4	Ogive (Cumulative Frequency Curve) 	✓ A Correct points plotted (upper limit; cum freq.) ✓ A smooth curve ✓ A grounded at (10; 0)	(3)
2.5	Estimation of Interquartile Range (IQR) from Ogive  $Q_1 \approx 27,5$ $Q_3 \approx 43,3$ $IQR = 43,3 - 27,5 = 15,8$	✓ CA $Q_1 \approx 27,5$ (accept 26 to 28) ✓ CA $Q_3 \approx 43,3$ (accept 42 to 44) ✓ CA $IQR = 15,8$ (accept 14 to 18)	(3)
2.6	Read off graph: CF at 45 is ~32 Learners = $40 - 32 = 8$	✓ CA 32 (accept 31 to 33) ✓ CA 8 (accept 7 to 9)	(2)
			[14]

QUESTION 3

3.1.1	 Construct perpendicular height (h) from vertex B to line AC $\sin A = \frac{h}{AB} \therefore AB \sin A = h$ $\sin C = \frac{h}{BC} \therefore BC \sin C = h$ $AB \sin A = BC \sin C$ $\frac{AB \sin A}{AB \cdot BC} = \frac{BC \sin C}{AB \cdot BC}$ $\frac{\sin A}{BC} = \frac{\sin C}{AB}$ i.e. $\frac{\sin A}{a} = \frac{\sin C}{c}$	✓ A construction ✓ A $\sin A = \frac{h}{AB}$ ✓ A $AB \sin A = h$ ✓ A $BC \sin C = h$ ✓ A $\frac{AB \sin A}{AB \cdot BC} = \frac{BC \sin C}{AB \cdot BC}$	(5)
3.2.1	$\frac{\sin R}{PQ} = \frac{\sin P}{QR}$ $\frac{\sin R}{55} = \frac{\sin 115^\circ}{80}$ $\sin R = \frac{55 \cdot \sin 115^\circ}{80} \approx 0,6231$ $\hat{R} = \sin^{-1}(0,6231) = 38,54^\circ$ $\hat{Q} = 180^\circ - 115^\circ - 38,54^\circ = 26,46^\circ$ $\frac{x}{\sin Q} = \frac{QR}{\sin P}$ $\frac{x}{\sin 26,46^\circ} = \frac{80}{\sin 115^\circ}$ $x = \frac{80 \cdot \sin 26,46^\circ}{\sin 115^\circ} = 39,3 \text{ m}$	✓ A $\frac{\sin R}{55} = \frac{\sin 115^\circ}{80}$ ✓ A $38,54^\circ$ ✓ A $26,46^\circ$ ✓ A $\frac{x}{\sin 26,46^\circ} = \frac{80}{\sin 115^\circ}$ ✓ A $39,3 \text{ m}$	(5)
			[10]

QUESTION 4

4.1	In $\triangle ABD$, $\hat{ADB} = 180^\circ - \theta$ $\frac{AD}{\sin \alpha} = \frac{AB}{\sin(180^\circ - \theta)}$ $AD = \frac{k \sin \alpha}{\sin \theta}$	✓ A $\hat{ADB} = 180^\circ - \theta$ ✓ A sine rule applied ✓ A $\sin(180^\circ - \theta) = \sin \theta$	(3)
4.2	In $\triangle ADC$, $\cos \theta = \frac{CD}{AD}$ $CD = AD \cos \theta$ $CD = \left(\frac{k \sin \alpha}{\sin \theta} \right) \cos \theta$ $CD = \frac{k \sin \alpha \cdot \cos \theta}{\sin \theta}$	✓ A $\cos \theta = \frac{CD}{AD}$ ✓ A sub $AD = \frac{k \sin \alpha}{\sin \theta}$	(2)
4.3	$\hat{BAD} = \theta - \alpha = 65^\circ - 35^\circ = 30^\circ$ $\frac{BD}{\sin 30^\circ} = \frac{12}{\sin 65^\circ}$ $BD = \frac{12 \sin 30^\circ}{\sin 65^\circ} = 6,62 \text{ cm}$ $CD = \frac{12 \sin 35^\circ \cdot \cos 65^\circ}{\sin 65^\circ} = 3,21 \text{ cm}$ $BC = BD + CD = 6,62 + 3,21 = 9,83 \text{ cm}$	✓ A $\hat{BAD} = 30^\circ$ ✓ A 6,62 cm ✓ A 9,83 cm	(3)
			[8]

QUESTION 5

5.1	In $\triangle ABC$: $AC^2 = 3^2 + 4^2 - 2(3)(4) \cos B = 25 - 24 \cos B$ In $\triangle ADC$: $\hat{D} = 180^\circ - B \text{ (opp } \angle\text{s of cyclic quad)}$ $AC^2 = 3^2 + 2^2 - 2(3)(2) \cos(180^\circ - B) = 13 + 12 \cos B$ Equating AC^2 : $25 - 24 \cos B = 13 + 12 \cos B$ $36 \cos B = 12$ $\cos B = \frac{1}{3}$	✓ A $25 - 24 \cos B$ ✓ A $\hat{D} = 180^\circ - B$ ✓ A $13 + 12 \cos B$ ✓ A equating and simplifying	(4)
5.2	$\sin B = \sqrt{1 - \cos^2 B} = \sqrt{1 - \frac{1}{9}} = \sqrt{\frac{8}{9}} = \frac{2\sqrt{2}}{3}$ Area ABCD = Area $\triangle ABC$ + Area $\triangle ADC$ $= \frac{1}{2}(3)(4) \sin B + \frac{1}{2}(3)(2) \sin B$ $= 9 \sin B$ $= 9 \left(\frac{2\sqrt{2}}{3} \right)$ $= 6\sqrt{2} \text{ cm}^2$	✓ A $\frac{2\sqrt{2}}{3}$ ✓ A $6\sqrt{2} \text{ cm}^2$	(2)
			[6]

TOTAL MARKS : 50