Numeracy 2025 v1.2

IA option B: Sample marking scheme

This sample has been compiled by the QCAA to assist and support teachers in planning and developing assessment instruments for individual school settings.

Examination — Personal identity and community

Assessment objectives

This assessment instrument is used to determine student achievement in the following objectives:

1. Identify and interpret mathematical information in the context of personal identity and community.
2. Use and apply mathematical knowledge in the context of personal identity and community.
3. Communicate and represent mathematical knowledge in the personal identity and community.

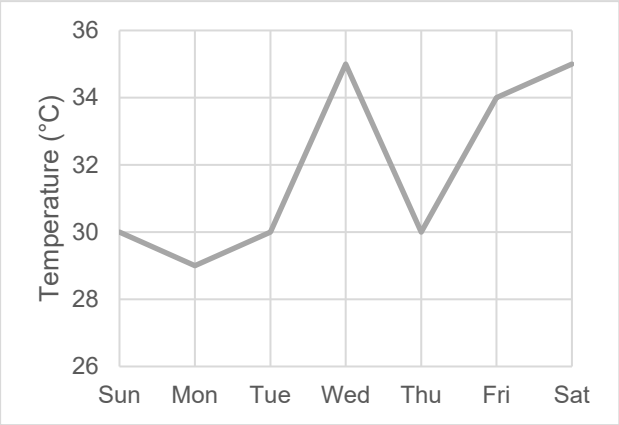
Purpose

The scheme provides:

- explicit statements about what is expected of students when they respond to a question
- sample responses that identify characteristics to assist the marker to make judgments
- where relevant, notes that provide further information to assist the marker in making a decision
- a tool for calibrating markers to ensure comparability of results.

Marking scheme

Q	Sample response	The response:	Notes
1a)	The likelihood of a rain is unlikely.	• correctly describes likelihood of rain appropriate terms **[1 mark]**	Accept alternative form, e.g. not likely
1b)	The most likely weather is sunny.	• correctly identifies most likely weather **[1 mark]**	Accept alternative form, e.g. clear day.
1c)	$\Pr(\text{sunny}) = \frac{5}{7}$	• selects an appropriate strategy to determine probability **[1 mark]**	Allow FT marks due to error/s in prior working. Accept other relevant strategy, e.g. identifying sunny weather, counting the number of sunny days.
	$\Pr(\text{sunny}) = 0.714$	• determines probability as a decimal number **[1 mark]**	Accept alternative form, e.g. 0.71, 0.7143, etc.
1d)	The day with the largest temperature difference is Wednesday.	• correctly identifies day with the largest temperature difference **[1 mark]**	

Q	Sample response	The response:	Notes
1e)		• correctly plots the points for Sunday, Tuesday, Thursday and Friday **[1 mark]**	
		• correctly plots points for Monday, Wednesday and Saturday **[1 mark]**	
2a)	Total cost $=3\times2\times\$6.00$	• correctly selects an appropriate strategy to determine cost **[1 mark]**	
	$=\$36.00$	• calculates the total cost **[1 mark]**	Allow FT marks due to error/s in prior working. Accept alternative form, e.g. \$36.
2b)	\$50 - \$36 = \$14	• calculates the amount of change **[1 mark]**	Only accept if the dollar sign is included.

Q	Sample response	The response:	Notes
2c)	$1800\,\text{mm} = 1.8\,\text{m}$	• correctly converts garden length to metres **[1 mark]**	This mark may be implied by subsequent working.
	$120\ \text{cm} = 1.2\ \text{m}$	• correctly converts garden width to metres **[1 mark]**	This mark may be implied by subsequent working.
	$A = l \times w$ $A = 1.8 \times 1.2$	• selects an appropriate strategy to determine area **[1 mark]**	Allow FT marks due to error/s in prior working. Accept other relevant strategy, e.g. 1.8×1.2.
	$A = 2.16\text{m}^2$	• calculates the total area of the garden in square metres **[1 mark]**	Accept alternative form, e.g. 2, 2.2.
2d	Area for carrots $= \frac{1}{6}$	• correctly writes fraction of garden used for carrots **[1 mark]**	
2e	Percentage of garden used for tomatoes $= \frac{3}{6}$	• correctly selects an appropriate strategy to determine percentage **[1 mark]**	Accept alternative form, e.g. $\frac{1}{2}$, 0.5.
	$= 50\%$	• determines percentage of garden used for tomatoes **[1 mark]**	Allow FT mark due to error/s in prior working.

Q	Sample response	The response:	Notes
3a	$A = L \times W$	• correctly selects an appropriate strategy to calculate area of base **[1 mark]**	
	$A = 5 \times 2$ $= 10\,m^2$	• calculates the area of pool base in metres squared **[1 mark]**	Allow different base of prism, e.g. 2×1.5 Allow FT marks due to error/s in prior working.
3b	$V = A \times H$	• selects an appropriate strategy to calculate volume **[1 mark]**	Accept other relevant strategy, e.g. $5 \times 2 \times 1.5$
	$V = 10 \times 1.5$ $= 15\,m^3$	• calculates the volume of the pool in cubic metres **[1 mark]**	
3c	$15\,m^3 = 15000\,L$	• converts from m^3 to L [**1 mark]**	
3d	30 kg is required	• determines the amount of salt in kg **[1 mark]**	
3e	$\frac{70}{15} = 4.67 = 5$ bags	• determines the whole number of 5 kg salt bags **[1 mark]**	
3f	$2 \times \$34 = \$68$	• determines the cost of the salt **[1 mark]**	