

Measurement: worked examples

HSC Mathematics Standard 2

These examples show assessable skills, not an official HSC topic weighting or prediction. The 2024 NSW syllabuses have their first HSC examination in 2027; students sitting the 2026 HSC continue under the applicable 2017 syllabus.

Worked example 1 | 2 marks

Catalog reference: std2_cssa25_appliance_energy_cost | seed 41001 | mapping std2-m1-4

Ceiling-fan electricity

A 225 W fan runs 8 hours per day for 60 days. Electricity costs \$7/25 per kWh.

(a) Calculate the running cost. [2 marks]

Answer: 756/25

Unit Conversion: 9/40

Energy Cost: 756/25

Worked example 2 | 2 marks

Catalog reference: std2_asc25_daily_heartbeats | seed 41001 | mapping std2-m7-1

Heart rate

Mona's heart beats 72 times per minute. How many times will it beat in 24 hours?

(a) Calculate the total number of beats. [2 marks]

Answer: 103680

Time Conversion: 1440

Rate: 103680

Worked example 3 | 2 marks

Catalog reference: std2_kil25_sydney_dubai_arrival_time | seed 41001 | mapping std2-m2-1

Sydney to Dubai flight

A flight leaves Sydney at 23:00 on Sunday and lasts 13 hours. Sydney is UTC+10 and Dubai is UTC+4. Find the local arrival time in Dubai.

(a) Give the arrival hour and day in Dubai. [2 marks]

Answer: 6

Time Addition: 36

Time Zone Conversion: 6

Source and methodology

Examples are deterministic curriq catalog generations from existing QDSL archetypes at the published fixed seed. The generator copies only student-facing prompts, mark allocations, topic mappings, display tables or options, checked answers and marking-path results into this resource.

Official syllabus source:

<https://curriculum.nsw.edu.au/learning-areas/mathematics/mathematics-standard-11-12-2024/overview/course>

Teacher verification note: check the mathematics, notation, permitted technology and syllabus fit for your cohort before classroom or assessment use.