

Financial Mathematics: 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_bar25_weekly_overtime_pay | seed 41001 | mapping std2-f1-2

Weekly earnings

Matthew earns \$30 per hour and receives time-and-a-half for hours beyond 38 in a week.

(a) Calculate his earnings for a 45-hour week. [2 marks]

Answer: 1455

Ordinary Pay: 1140

Overtime Pay: 1455

Worked example 2 | 2 marks

Catalog reference: std2_asc25_dividend_yield | seed 41001 | mapping std2-f4-1

Dividend yield

Ray owns 7200 shares with a total market value of \$108000. The dividend is \$6/5 per share.

(a) Calculate the dividend yield as a percentage. [2 marks]

Answer: 8

Unit Price: 15

Percentage: 8

Worked example 3 | 2 marks

Catalog reference: std2_sgs25_declining_balance_depreciation | seed 41001 | mapping std2-f4-2

Declining-balance depreciation

A photocopier purchased for \$12000 depreciates by 20% per year using the declining-balance method.

(a) Find its value after 3 years, to the nearest cent. [2 marks]

Answer: 6144

Percentage Decrease: 4/5

Compound Depreciation: 6144

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.