

Guide to making judgments — Year 9 Mathematics

Name

Focus: Apply mathematical reasoning when buying and listening to music, and reflect on understandings to plan an outdoor concert.

Knowledge and understanding	Thinking and reasoning	Thinking and reasoning Reflecting	Communicating	
<p>Performs calculations involving cash, credit, rate and time. Analyses graphical data to make inferences about safe sound levels.</p> <p>Questions 1–4, 6, 7, 10</p>	<p>Solves problems involving download rate, interest rate and loudness data, and justifies reasoning.</p> <p>Questions 5, 8, 9, 11, 12</p>	<p>Chooses strategies and procedures to plan physical, financial and safety aspects of an outdoor concert. Justifies reasoning by reflecting on learning and applying understandings.</p> <p>Questions 13–16</p>	<p>Uses mathematical language and representations when communicating, thinking and justifying reasoning.</p> <p>Questions 1–16</p>	
<p>◀ Demonstrates consistent success with calculations involving cost, time, discount, deposit and interest; accurately infers from graphical data.</p>	<p>◀ Correctly calculates interest rate; uses clear, valid mathematical reasoning to justify a recommendation to borrow or save, a safe listening time and volume for an MP3 player, and a safe listening distance at a concert.</p> <p>◀ Correctly determines download time for music and a safe listening distance at a concert.</p>	<p>◀ Justifies strategies with accurate and perceptive application of assumptions, understandings and all relevant information.</p> <p>◀ Justifies chair numbers by correctly applying understanding of loudness; uses valid assumptions and sound mathematical reasoning to make decisions on running cost, ticket price and screening.</p>	<p>◀ Clearly communicates procedures, reasoning and justification using mathematical representations, language, working, rounding and units.</p>	A
<p>◀ Demonstrates proficiency with single-step calculations involving cost and time, and in inferring from graphical data; some success with calculations involving discount, deposit and interest.</p>	<p>◀ Determines a safe listening time or volume setting for an MP3 player; makes progress towards determining download time for music and a safe listening distance at a concert; justifies a recommendation to borrow or save.</p>	<p>◀ Calculates chair numbers with reference to loudness levels. Calculates running cost and ticket price based on some valid assumptions.</p>	<p>◀ Shows working and units in most calculations; makes some use of mathematical language in explanations.</p>	B
<p>◀ Demonstrates some success with single-step calculations involving cost and time, and in inferring from graphical data.</p>	<p>◀ Demonstrates some progress towards determining download time, a safe listening time or volume, or a safe listening distance.</p>	<p>◀ Makes some correct calculations involving chair numbers, running cost or ticket price.</p>		C
				D
			<p>◀ Occasionally shows working.</p>	E

Feedback

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