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| Australian Curriculum Year 7 Mathematics Sample assessment   | Task-specific standards — continua  Refreshing drinks | Name |
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**Purpose of assessment:** Students use procedures and an understanding of ratios, fractions and percentages to solve problems when mixing ingredients for fruity drinks.

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| Understanding and Skills | | | | | |  |
| Understanding and Fluency | | | | Problem solving and Reasoning | |  |
| Procedural fluency — recall and use of facts, definitions, technologies and procedures (Q1–6, 7ab, 8, 9)  Expressing quantities as ratios, fractions, and percentages. Operating with fractions and percentages to solve ratio problems. | | Use of mathematical language, conventions and symbols (Q1–10)  Using conventions to express quantities as ratios, fractions and percentages. Showing working and making use of units. | | Application of problem-solving approaches (Q7c, 10)  Solving problems involving ratios. | |  |
| Use of procedures to express quantities as ratios, fractions, and percentages.  Use of ratios and operations involving fractions or percentages to solve problems involving ratios of three quantities (Q8, 9). | Effective and clear use of conventions when writing ratios and fractions.  Detailed working and consistent use of appropriate units. | | Systematic application of problem-solving approaches to correct a drink mixed in an incorrect ratio and to determine the required quantities for mixing a punch. | |  | A |
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| Use of equivalent fractions and ratios, and of operations involving fractions or percentages, to solve problems involving ratios of two and three quantities (Q5–7b). |  | |  | |  | B |
|  |  | |  | |  |
| Use of procedures to express quantities as ratios, fractions, equivalent fractions and percentages (Q1–3).  Use of equivalent fractions and ratios, and of operations involving fractions or percentages, to find solutions in problems involving ratios (Q4). | Satisfactory working and use of conventions when writing ratios, fractions and units. | | Progress in application of problem-solving approaches to correct a drink mixed in an incorrect ratio or to determine the required quantities for mixing a punch. | |  | C |
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|  |  | |  | |  | D |
|  | Use of aspects of conventions when writing ratios and fractions. Some working and use of units. | | Some application of problem-solving approaches to correct a drink mixed in an incorrect ratio. | |  |
| Partial use of procedures to express some quantities as ratios, fractions, equivalent fractions or percentages. |  | |  | |  | E |
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