

Mathematics Level 3

End-of-year review

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End-of-year review

Assesses: samples from all six strands, drawn from work already assessed in the chapter tests and the tasks — Number (VC2M3N01, VC2M3N02, VC2M3N03, VC2M3N04, VC2M3N06, VC2M3N07, VC2M3N08), Algebra (VC2M3A01, VC2M3A02, VC2M3A03), Measurement (VC2M3M01, VC2M3M02, VC2M3M03, VC2M3M04), Space (VC2M3SP01, VC2M3SP02), Statistics (VC2M3ST01) and Probability (VC2M3P02). **Total: 30 marks.**

Teacher note. This is a classroom check, not an exam. It is cumulative: every item draws on content already taught and assessed in Chapters 1–7, and there is no new content. It checks what students retain before they move to Level 4, and it gives a Year 4 teacher receiving the class a picture of where the gaps are.

This review looks back at the mathematics from all seven chapters. There are 16 questions. Nothing in it is new — every question is about something you did this year. Show your working, so your teacher can see what you know.

Timing. This review is untimed. Guidance duration for a teacher planning a lesson: about 35 minutes. It may be split across two sittings.

Equipment. A pencil and paper, and a coin for Question 16. The clock faces and the tally chart you need are in this review.

Calculators. Do not use a calculator for Questions 3 and 7 — the content they assess says *without a calculator* (VC2M3N04, VC2M3A02). You may use a calculator for the other questions if your teacher agrees, but you do not need one.

Questions

Q1. The Royal Melbourne Show runs every spring at the showgrounds in Ascot Vale, and about five hundred thousand people go each year.

Source: Wikipedia, *Royal Melbourne Show*, retrieved 2026-08-20.

- (a) Write *five hundred thousand* in digits. [1]
- (b) Put these numbers in order, smallest to biggest: 9 990, 10 009, 9 099, 9 909. [1]

Q2. Look at the number 4 386. Is it odd or even? How do you know? [1]

Q3. Do not use a calculator. Show how you worked.

- (a) $356 + 277$ [1]
- (b) $604 - 258$ [1]

Q4. (a) Work out $\frac{2}{6} + \frac{3}{6}$. [1]

- (b) Mum cuts a banana into 4 equal pieces. Priya eats 1 piece. What fraction of the banana is left? [1]

Q5. It costs \$1.70 to post a letter in Australia.

Source: Wikipedia, *Australia Post*, retrieved 2026-08-20.

- (a) Mia's class posts 2 letters. What is the cost altogether? [1]
- (b) Zoe pays with a \$5 note. How much change does she get? [1]
- (c) Show \$1.60 in two different ways, using notes and coins. [1]

Q6. (a) Round each number to the nearest hundred, then estimate $218 + 391$. [1]

- (b) Ben says $218 + 391 = 709$. Use your estimate to decide if Ben can be right. Explain. [1]

Q7. Do not use a calculator.

- (a) $8 + 6 = ?$ [1]
(b) Use your answer to part (a) to work out $38 + 6$ in your head. [1]

Q8. Find the number that goes in the box $\square$.

- (a) $36 + \square = 100$ [1]
(b) $\square - 158 = 275$. Think: what does $275 + 158$ make? [1]

Q9. (a) $6 \times 5 = ?$ [1]

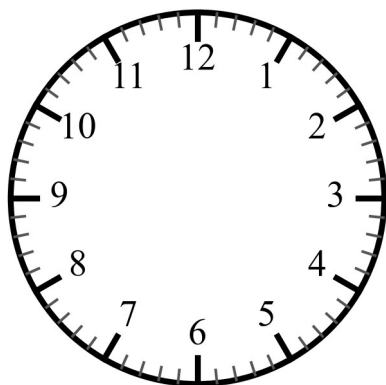
- (b) Write the related division fact for your answer to part (a). [1]

Q10. (a) Circle the best unit for each one. [1]

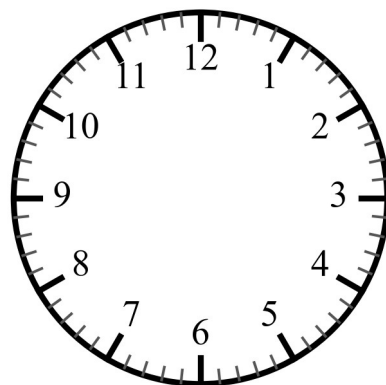
- the length of your classroom: g · m · L
 - the water in a bucket: cm · L · kg
 - the mass of a strawberry: g · m · mL
- (b) About how long is a new pencil? Circle one: 2 cm · 20 cm · 2 m [1]

Q11. Basketball training starts at 3:40 and runs for 45 minutes. What time does it finish? [1]

Q12. The two clock faces have numbers but no hands.



A



B

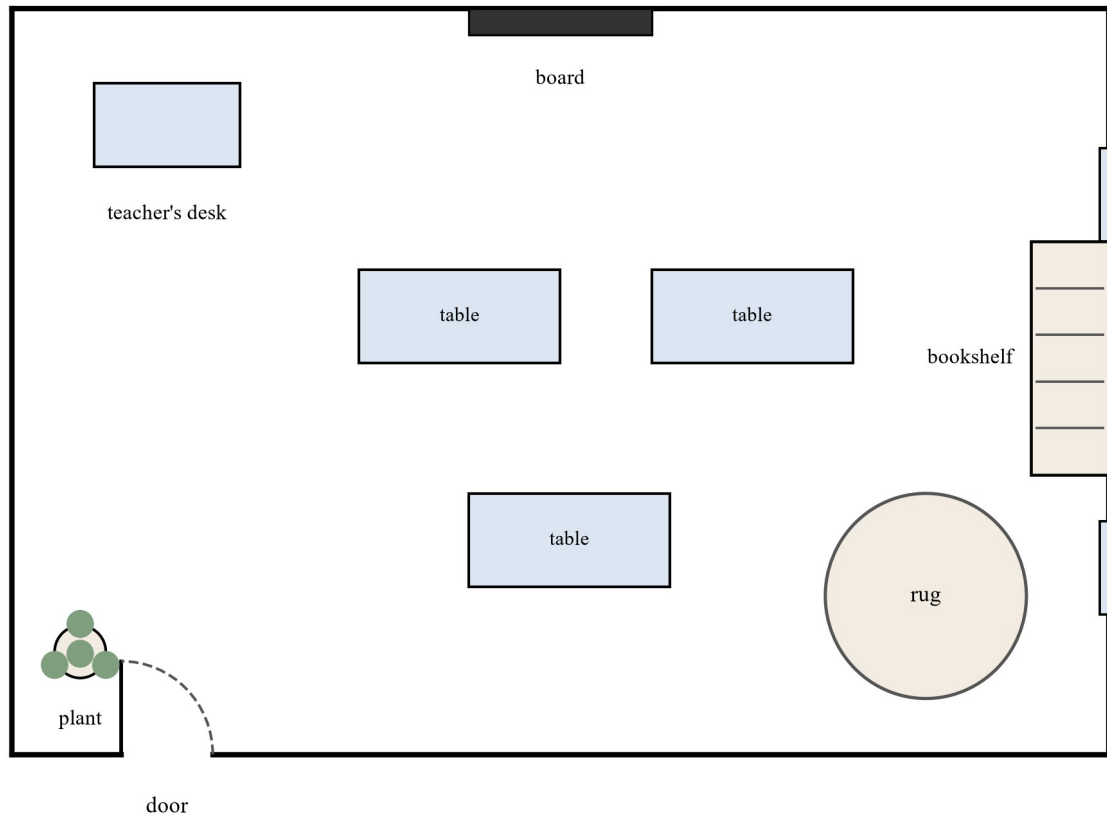
Two empty clock faces with numbers but no hands, labelled A and B.

- (a) Draw hands on clock A to show 7:45. [1]
(b) Draw hands on clock B to show 10:08. [1]

Q13. I am a solid. All 6 of my faces are squares, and I have 8 vertices. What solid am I? [1]

Q14. Look at the plan of the classroom. It is a view from above.

A plan of a classroom



A plan of a classroom seen from above. There is a door on the bottom wall and a board on the top wall. Inside the room there is a teacher's desk, three tables, a bookshelf on the right wall between two windows, a round rug in the corner, and a plant next to the door. The words at the top say, 'A plan of a classroom'.

- (a) Where is the bookshelf? [1]
- (b) What is next to the door? [1]

Q15. Ms Chen's class asked 15 students, "How did you get to school today?" Here are the 15 answers, in the order they were collected: walk, bus, walk, car, walk, train, bus, walk, car, walk, bus, walk, car, train, walk.

- (a) Complete the frequency table. [1]

Way of getting to school	Frequency
walk	—
bus	—
car	—
train	—
Total	—

- (b) Which way of getting to school was the most common? [1]

Q16. You will need a coin.

- (a) Toss the coin 10 times. Record each toss in the tally chart. H stands for heads and T stands for tails. [1]

Tally chart for 10 coin tosses

Side	Tally
Heads	
Tails	

A blank tally chart titled Tally chart for 10 coin tosses, with a row for Heads and a row for Tails. Each row has an empty box for tally marks.

- (b) Your friend tosses the same coin 10 times. Do they have to get the same number of heads as you? Circle one: yes · no. Explain your answer. **[1]**
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Marking guide

This is a classroom check, not an exam. There are **30 marks**. Award the marks below for the responses described; accept any correct method unless a question says otherwise. The wording in brackets after each question is drawn from the Level 3 achievement standard, so a teacher’s judgement maps to VCAA wording without translation.

Strand	Questions	Marks
Number	Q1–Q6	12
Algebra	Q7–Q9	6
Measurement	Q10–Q12	5
Space	Q13–Q14	3
Statistics	Q15	2
Probability	Q16	2
Total		30

Q1 — VC2M3N02 — 2 marks. (*Orders and represents natural numbers beyond 10 000.*) (a) Writes the digits 500 000 [1]. The space as the group separator is the convention taught with VC2M3N02; do not withhold the mark if the space is missing. (b) 9 099, 9 909, 9 990, 10 009 [1].

Q2 — VC2M3N01 — 1 mark. (*Classifies numbers as either odd or even, and uses the properties of odd and even numbers.*) Says even, with a reason that uses the ones digit: 4 386 ends in 6, and numbers ending in 0, 2, 4, 6 or 8 are even [1]. Accept a reason in terms of pairing or halving (“it can be split into two equal groups”).

Q3 — VC2M3N04 — 2 marks. (*Partitions, rearranges and regroups two- and three-digit numbers in different ways to assist in calculations.*) No calculator for this question. (a) 633 [1]. (b) 346 [1]. Award each mark for the correct answer with working that shows a valid method (partitioning, jottings, bridging or giving both numbers the same amount). A correct answer with no working still earns the mark, but the working is what lets the teacher see the method.

Q4 — VC2M3N03 — 2 marks. (*Represents unit fractions and their multiples in different ways.*) (a) $\frac{5}{6}$ [1]. (b) three-quarters, $\frac{3}{4}$ [1]. Do not require or reward simplification or equivalence — those are Level 4.

Q5 — VC2M3N07 and VC2M3N08 — 3 marks. (*Represents money values in different ways; applies mathematical modelling to solve practical problems.*) (a) \$3.40 [1]. (b) \$1.60 [1]. (c) Any two different ways to make \$1.60 using real Australian coins and notes [1] — for example \$1 + 50c + 10c; 50c + 50c + 50c + 10c; eight 20c coins; sixteen 10c coins; \$1 + 20c + 20c + 20c. Both ways must total \$1.60.

Q6 — VC2M3N06 — 2 marks. (*Makes estimates and determines the reasonableness of calculations.*) (a) 218 rounds to 200 and 391 rounds to 400; $200 + 400 = 600$ [1]. (b) Ben cannot be right, because the answer should be about 600 and 709 is much bigger [1]. Accept any explanation that compares 709 with the estimate of about 600. The exact answer is 609.

Q7 — VC2M3A02 — 2 marks. (*Extends and uses single-digit addition facts and applies additive strategies.*) No calculator for this question. (a) 14 [1]. (b) 44 [1]. Award the mark for a correct answer reached by a mental strategy; the intended strategy uses part (a), since $38 + 6$ is 30 more than $8 + 6$, so $14 + 30 = 44$. Accept other correct mental strategies, such as $38 + 2 = 40$, then $40 + 4 = 44$.

Q8 — VC2M3A01 — 2 marks. (*Finds unknown values in number sentences involving addition and subtraction.*) (a) $\square = 64$ [1]. (b) $\square = 433$ [1]. Award each mark for the correct value; look for the inverse connection — $100 - 36 = 64$, and $275 + 158 = 433$ — when asking students how they know.

Q9 — VC2M3A03 — 2 marks. (*Recalls multiplication facts for twos, threes, fours, fives and tens, and applies them to the related division facts.*) (a) 30 [1]. (b) Either related division fact: $30 \div 6 = 5$ or $30 \div 5 = 6$ [1].

Q10 — VC2M3M01 and VC2M3M02 — 2 marks. (*Uses familiar metric units when estimating, comparing and measuring the attributes of objects and events.*) (a) All three correct [1]: the length of the classroom in metres (m); the water in a bucket in litres (L); the mass of a strawberry in grams (g). (b) 20 cm [1].

Q11 — VC2M3M03 and VC2M3M04 — 1 mark. (*Estimates and compares measures of duration using formal units of time.*) Finishes at 4:25 [1]. Award the mark for the correct time; the working may count on 45 minutes from 3:40 in any valid way (for example 20 minutes to 4:00, then 25 more).

Q12 — VC2M3M04 — 2 marks. (*Describes the relationship between the hours and minutes on analog and digital clocks, and reads the time to the nearest minute.*) (a) Clock A: the minute hand points to the 9 (45 minutes) and the hour hand is between the 7 and the 8, closer to the 8 [1]. (b) Clock B: the minute hand points 8 minute marks past the 12 (that is, between the 1 and the 2) and the hour hand is just past the 10 [1]. Accept hands drawn close to the correct positions; the minute hand must be exact to the minute.

Q13 — VC2M3SP01 — 1 mark. (*Makes, compares and classifies objects using key features.*) A cube [1].

Q14 — VC2M3SP02 — 2 marks. (*Interprets two-dimensional representations of familiar environments.*) (a) The bookshelf is on the right wall, between the two windows [1]. (b) The plant [1].

Q15 — VC2M3ST01 — 2 marks. (*Conducts guided statistical investigations involving categorical and discrete numerical data, and records the data using appropriate methods, including frequency tables.*) (a) Frequencies: walk 7, bus 3, car 3, train 2, with a total of 15 [1]. Award the mark when all four frequencies and the total are correct and the total reconciles with the 15 answers collected. (b) walk [1].

Q16 — VC2M3P02 — 2 marks. (*Conducts repeated chance experiments and discusses variation in results.*) (a) A completed tally chart in which the heads count and the tails count add to 10 [1]. Any split of the 10 tosses is correct — the results are the student's own. (b) no [1], with an explanation that recognises variation: results from chance experiments vary, so a friend's 10 tosses will not necessarily give the same number of heads. The same number is possible, but it does not have to happen.

Solutions

Q1. (a) Five hundred thousand is 500 000. (b) Smallest to biggest: 9 099, 9 909, 9 990, 10 009. 10 009 is the only one with five digits that starts with 1 in the ten-thousands place, so it is the biggest; for the others, compare the thousands, then the hundreds.

Q2. 4 386 is even. It ends in 6, and every number that ends in 0, 2, 4, 6 or 8 is even.

Q3. (a) $356 + 277$: partition both numbers: $356 = 300 + 50 + 6$ and $277 = 200 + 70 + 7$. Add each place: $300 + 200 = 500$, $50 + 70 = 120$, $6 + 7 = 13$. Then $500 + 120 + 13 = 633$. (b) $604 - 258$: give both numbers 2 more, so $604 + 2 = 606$ and $258 + 2 = 260$. Then $606 - 260 = 346$, so $604 - 258 = 346$. Check with addition: $346 + 258 = 604$. ✓

Q4. (a) The bottom numbers are the same, so add the top numbers: $2 + 3 = 5$. $\frac{2}{6} + \frac{3}{6} = \frac{5}{6}$. (b) 4 equal pieces with 1 eaten leaves 3 pieces, so three-quarters, $\frac{3}{4}$, of the banana is left.

Q5. (a) 2 letters at \$1.70 each: $\$1.70 + \$1.70 = \$3.40$. (b) Change from \$5: $\$5 - \$3.40 = \$1.60$. (c) Two ways to make \$1.60: $\$1 + 50c + 10c$, and $50c + 50c + 50c + 10c$. (Other correct answers are possible.)

Q6. (a) 218 rounds to 200 and 391 rounds to 400, so the estimate is $200 + 400 = 600$. (b) Ben cannot be right. The answer should be about 600, and 709 is much bigger than 600. The exact answer is 609, which is close to the estimate.

Q7. (a) $8 + 6 = 14$. (b) $38 + 6$ is 30 more than $8 + 6$, so $14 + 30 = 44$.

Q8. (a) $36 + \square = 100$. Think $100 - 36 = 64$, so $\square = 64$. Check: $36 + 64 = 100$. ✓ (b) $\square - 158 = 275$. Addition undoes subtraction: $275 + 158 = 433$, so $\square = 433$. Check: $433 - 158 = 275$. ✓

Q9. (a) $6 \times 5 = 30$. (b) The related division facts are $30 \div 6 = 5$ and $30 \div 5 = 6$. Either one answers the question.

Q10. (a) The length of the classroom is measured in metres (m). The water in a bucket is measured in litres (L). The mass of a strawberry is measured in grams (g). (b) 20 cm — 2 cm is shorter than a finger, and 2 m is taller than most Year 3 students.

Q11. Count on 45 minutes from 3:40: 20 minutes to 4:00, then 25 more minutes makes 4:25. Training finishes at 4:25.

Q12. (a) On clock A, 7:45: the minute hand points to the 9, because 45 minutes is 9 lots of 5 minutes, and the hour hand sits between the 7 and the 8, closer to the 8. (b) On clock B, 10:08: the minute hand points 8 small minute marks past the 12, and the hour hand has just passed the 10.

Q13. A cube. A cube has 6 faces and every face is a square, and it has 8 vertices.

Q14. (a) The bookshelf is on the right wall, between the two windows. (b) The plant is next to the door.

Q15. (a) Count each answer in the list: walk 7, bus 3, car 3, train 2. The total is $7 + 3 + 3 + 2 = 15$, which matches the 15 answers collected. (b) walk has the largest frequency, so walking was the most common way to get to school.

Q16. (a) Answers will vary. Toss the coin 10 times and record each one; for example, 6 heads and 4 tails. The heads count and the tails count must add to 10. (b) No. Tossing a coin is a chance experiment, so the results vary. Your friend might get the same number of heads, but they do not have to.