

NAPLAN NUMERACY QUESTIONS

Introduction.

The sample maths PDF below contains four practice problems for the numeracy portion of the NAPLAN test for years 3, 5, 7, and 9. The purpose of these sample problems is to familiarise students with NAPLAN numeracy questions. These sample problems will help students get a taste of the different types of problems that appear on the NAPLAN. Understanding what to expect on the test will improve a student's chances of success as well as help reduce anxiety on test day.

Directions.

Read each problem carefully. Then, follow the directions to answer each problem. Pay attention that there may be problems consisting of several parts. If a problem asks you to show or explain your work, you must do so. After you finish solving the sample problems, go over the **Answers & Explanations** section located at the end of this document. The explanations may include important tips and solving methods.

For full-length practice tests, hundreds of sample questions, study guides, and helpful information, go to:

<http://www.jobtestprep.co.uk>

Year 3

Barry is organising a dinner for 16 people. Three quarters of them are vegetarians. How many vegetarian dishes does he need to prepare if each person wants **two** dishes?

Year 5

A test consists of multiple-choice questions and open questions. Points are scored for each question.

Type of Question	Points per question
Multiple Choice	5
Open	10

Overall, there are 15 questions, worth a total of 100 points. How many multiple-choice questions are there?

Year 7

In a pop concert ticket office, there are five sales representatives. In a certain week, their sales are as follows:

\$1100, \$1105, \$1107, \$1112, and \$1156.

What is their mean (average) of sales for that week?

\$1107

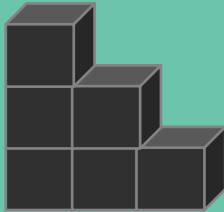
\$1114

\$1116

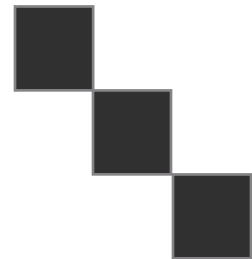
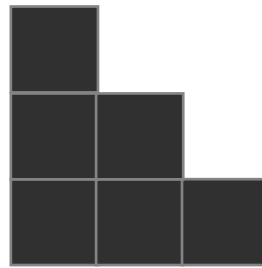
\$1128

Year 9

Six cubes are joined to form the following object.



What will the shape look like from above?



Answers and Explanations

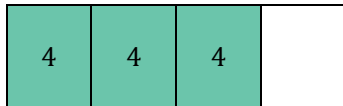
Year 3

The correct answer is (24).

To answer this question, you must first find what $\frac{3}{4}$ of 16 is. This can be done in two ways.

One option is to find a simpler fraction, $\frac{1}{4}$ of 16, by splitting 16 into four equal parts. To do this, you can divide 16 by 4.

$16 \div 4 = 4$. Every quarter represents four people at the dinner, as seen in the diagram:



Since you want to find $\frac{3}{4}$ of the people, you need to multiply the $\frac{1}{4}$ by 3, so $3 \times 4 = 12$ people.

Alternatively, $\frac{3}{4}$ of 16 also means $\frac{3}{4} \times 16$, as 'of' means multiply in math. $\frac{3}{4} \times 16 = \frac{48}{4}$, as $16 \times 3 = 48$.

You now need to reduce the fraction by dividing the top and bottom by 4 to give $\frac{12}{1}$ or 12 people.

If each vegetarian wants two dishes, you need to double 12, and then you get 24 dishes ($12 \times 2 = 24$).

Therefore, the correct answer is (24).

Year 5

The correct answer is (10).

To solve this problem, mark the number of multiple-choice questions with M and the number of open questions with P . Now, translate the problem into a system of two equations.

Equation 1: Since there is an overall number of 15 questions, one may conclude that $M + P = 15$.

Subtract M from both sides and conclude that $P = 15 - M$

Equation 2: Since each multiple-choice question is worth five points, each open question is worth 10 points, and there are 100 points in total, one may conclude that $5M + 10P = 100$.

As P is equal to $15 - M$, you can replace P in this equation with $15 - M$, to give

$$5M + 10(15 - M) = 100.$$

Next, start to solve the equation.

$$5M + 150 - 10M = 100 \quad // \text{ multiply across the parentheses}$$

$$-5M + 150 = 100 \quad // \text{ add the M terms}$$

$$-5M = -50 \quad // \text{ subtract 150 from both sides}$$

$$M = 10 \quad // \text{ divide both sides by } -5$$

Therefore, the number of multiple-choice questions is 10.

Solving tip: If you are completely stuck, you can try using trial and error to find the result by first picking values for M and P and then trying them in the equation to see if they work. If not, continue adjusting until you get closer to the answer.

Year 7

The correct answer is (1116).

To solve this problem, find the average of the five values given. Note that all values can be represented as \$1100 + a two-digit number. Thus, you can calculate the average for the two-digit numbers and conclude for the original values. To find this two-digit number, take each number in turn and subtract 1100 from it:

$$1100 - 1100 = 00$$

$$1105 - 1100 = 05$$

$$1107 - 1100 = 07$$

$$1112 - 1100 = 12$$

$$1156 - 1100 = 56$$

When calculating an average, find the sum of the values and divide the sum by the number of values.

Calculate the sum of 00, 05, 07, 12, and 56:

$$0 + 5 + 7 + 12 + 56 = 80$$

Divide the sum by 5 ($80 \div 5 = 16$). Add the missing 1100 and conclude that the average of sales for that week is \$1116.

Alternatively, just sum the original numbers and divide by 5

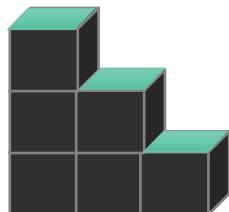
$$\frac{1100 + 1105 + 1107 + 1112 + 1156}{5} = 1116.$$

Therefore, the correct answer is (1116).

Year 9

The correct answer is (B), the second answer.

The front view, side view, and top view are 2D representations of a 3D object when viewed from the front, side, or above. You are looking for the top view, i.e. how the shape looks from above. If you were directly above the object, you would not be able to see all the faces, rather only the three faces on top (highlighted in color).



As you are viewing from above, you will not be able to see the difference in height, and thus all three squares will appear to lie in one horizontal line with each other. This is shown in answer (B).

Answer (A) shows the side view of the object.

Answer (C) shows the front view of the object.

Answer (D) shows part of the front view of the object.

Therefore, the correct answer is (B), the second answer.