

LITERACY AND NUMERACY
TEST FOR INITIAL TEACHER
EDUCATION STUDENTS

Numeracy

Practice Questions September 2023

NUMERACY PRACTICE QUESTIONS

These Numeracy practice questions are presented in printable format. The actual test is taken online.

There are 20 practice questions in this paper. The actual Numeracy test has 65 questions.

Answers to the questions appear at the end of this PDF. Worked solutions appear in a separate PDF.

SECTION 1: CALCULATOR AVAILABLE

There are 15 practice questions in this section. In the actual test there are 52 questions in section 1.

For the actual test, the basic online calculator provided within the test is to be used. Scrap paper for written calculations is also provided.

AUD TO USD

This table shows the value of 1 Australian dollar (AUD) in US dollars (USD) from 2012 to 2022.

For example, at the start of 2015 the value of 1 AUD was 0.81 USD.

Year	Year Start	Year High	Year Low	Year End
2022	0.73	0.76	0.62	0.68
2021	0.77	0.80	0.70	0.73
2020	0.70	0.77	0.57	0.77
2019	0.70	0.73	0.67	0.70
2018	0.78	0.81	0.70	0.70
2017	0.72	0.81	0.72	0.78
2016	0.73	0.78	0.69	0.72
2015	0.81	0.82	0.69	0.73
2014	0.89	0.95	0.81	0.82
2013	1.05	1.06	0.89	0.89
2012	1.04	1.08	0.97	1.04

Question 1

For how many of the 11 years was the value of 1 AUD **greater than** 1 USD at both the start **and** the end of the year?

Question 2

In which one of these years did the value of 1 AUD in USD show the greatest change between Year High and Year Low?

- A 2012
- B 2013
- C 2020
- D 2022

NATURAL LIGHT

In one Australian jurisdiction, a guideline for planning child care centres concerns the provision of natural light.

Child care centres should have a total window area of not less than 10 per cent of the floor area of the room.

Question 3

Below are some combinations of floor and window dimensions.

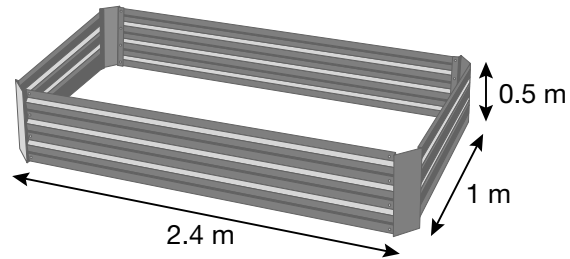
Does each combination meet the guideline?

Select 'Yes' or 'No' for each combination.

Combination	Yes	No
<ul style="list-style-type: none">Floor 7 m by 9 m.1 window 3 m by 2 m.	<input type="radio"/>	<input type="radio"/>
<ul style="list-style-type: none">Floor 8 m by 8 m.4 windows, each 1 m by 2 m.	<input type="radio"/>	<input type="radio"/>

PLANTER BOX

A store sells planter boxes with the dimensions shown.



Question 4

The store also sells 50-litre bags of soil.

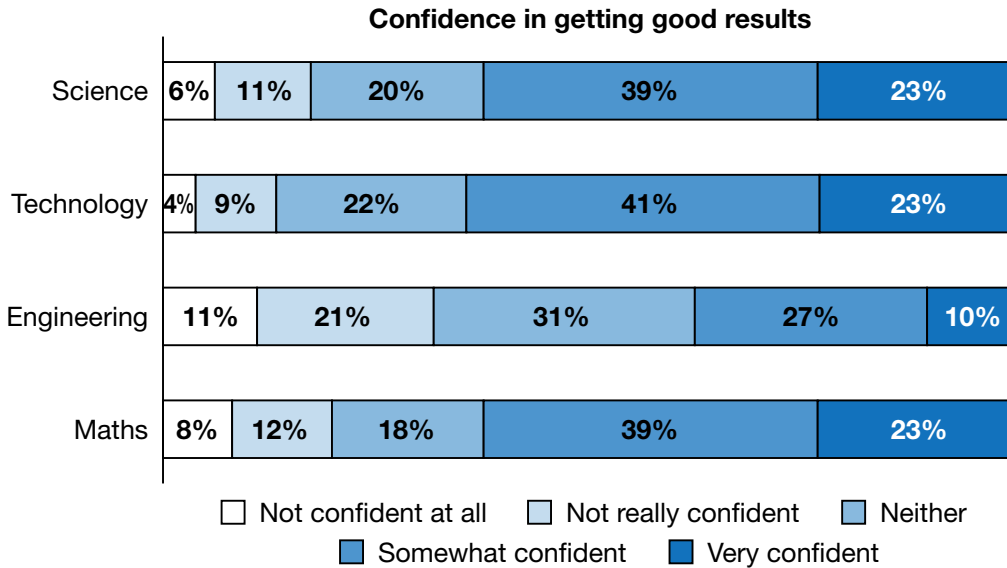
50 litres is equivalent to 0.05 m^3 in volume.

How many bags of soil are required to fill one planter box?

STEM CONFIDENCE

In 2019, 2000 students between the ages of 12 and 25 were surveyed about their confidence in STEM (Science, Technology, Engineering, Maths) subjects.

The results are shown in this graph.



Source: Youth Insight Report, Australian Government, 2019

Question 5

Below are some statements about the graph.

Select 'True', 'False' or 'Unable to determine' for each statement.

Statement	True	False	Unable to determine
The STEM subject with the lowest percentage of students who reported they are 'Somewhat confident' or 'Very confident' was Engineering.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More than 100 students reported they were 'Not confident at all' in Technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The students who reported they were 'Very confident' in Science were the same students who reported they were 'Very confident' in Technology and 'Very confident' in Maths.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

STUDENT DATA

A team of teachers look at the student scores for a comprehension test.

This table summarises the scores. The test had a maximum raw score of 30.

Raw Score	Number of students
Less than 5	2
6 - 10	4
11 - 15	8
16 - 20	12
21 - 25	13
26 - 30	11
Total	50

Question 6

Students who score 15 or less will be part of a targeted teaching program.

What percentage of the group of students will be part of the targeted teaching program?

_____ %

PAYING FOR DINNER

Kim and Lee meet for dinner.

Kim has a burger for \$15.90 and Lee has a salad for \$14.90.

They each have a drink. Each drink costs \$4.

Question 7

Kim pays for both dinners with a \$50 note.

How much change should Kim receive?

\$ _____

FIRST RIBBONS

A teacher wants to make 80 'First' ribbons for a school sports day.

Each ribbon is 12 centimetres long.

Question 9

Which of the following is the shortest roll of ribbon that the teacher requires?

- A 1-metre roll
- B 7-metre roll
- C 10-metre roll
- D 100-metre roll

STUDENTS PER TEACHER

This table shows the average numbers of students per teacher in primary and secondary schools across the Government, Catholic and Independent sectors over several years.

Year	Government Primary	Government Secondary	Catholic Primary	Catholic Secondary	Independent Primary	Independent Secondary
1980	20.2	12.2	23.9	16.6	17.3	13.3
2021	14.4	12.4	15.4	12.2	14.0	10.5

Source: Australian Bureau of Statistics, The Australian Government Department of Education, Skills And Employment, The Productivity Commission, ACARA, 2022

Question 10

A Government primary school employed 40 teachers in 1980.

The average number of students per teacher for the school was equal to the relevant average value shown in the table.

What was the total number of students enrolled at the school in 1980?

Question 11

A Catholic secondary school had a total enrolment of 1098 students in 2021.

The average number of students per teacher for the school was equal to the relevant average value shown in the table.

What was the total number of teachers at the school in 2021?

TIDE TIMES

A teacher plans an excursion to a beach.

This table gives the times and heights of high tides and low tides at the beach for the week in which the excursion is planned.

	Monday		Tuesday		Wednesday		Thursday		Friday	
Tide	Time	Height (m)	Time	Height (m)	Time	Height (m)	Time	Height (m)	Time	Height (m)
High Tide	0358	2.74	0433	2.83	0507	2.87	0541	2.88	0615	2.85
Low Tide	0954	0.76	1029	0.74	1100	0.75	1141	0.79	1213	0.84
High Tide	1559	2.55	1630	2.57	1701	2.58	1733	2.57	1805	2.54
Low Tide	2205	0.49	2233	0.41	2301	0.37	2330	0.36	2359	0.38

Question 12

The excursion has the following requirements:

- The earliest time the class can arrive at the beach is 9:30 am
- The class must leave the beach no later than 2:00 pm
- The class needs to be at the beach at least 2 hours before, and at least 2 hours after, a low tide

Which day satisfies the requirements?

- A Tuesday
- B Wednesday
- C Thursday
- D Friday

WEEKLY RENT

This table shows some data for five houses that are available to rent.

House	Number of bedrooms	Weekly rent (\$)
1	2	440
2	3	480
3	3	680
4	2	380
5	2	420

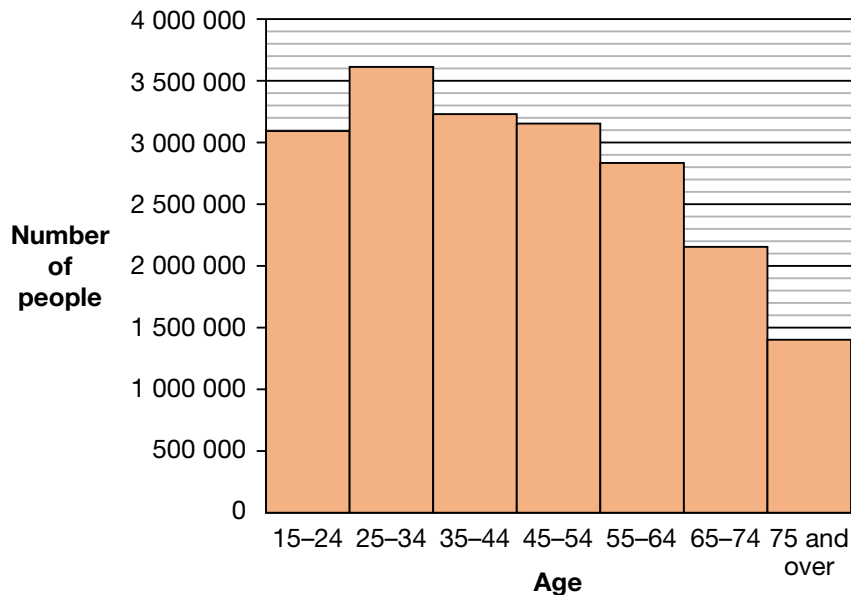
Question 13

What is the median of the weekly rent for the five houses?

- A \$440
- B \$480
- C \$680
- D \$380
- E \$420

EVENT ATTENDANCE

This graph shows the number of people in various age categories who attended at least one cultural event in Australia in one year.



Source: Australian Bureau of Statistics, 2019

Question 14

How many more people in the 15-24 years category attended at least one cultural event than people in the 75 and over category?

- A 1 500 000
- B 1 700 000
- C 3 100 000
- D 3 200 000

Question 15

Below are some statements about the graph.

Select 'True' or 'False' for each statement.

Statement	True	False
The number of people in the 15–24 age group who attended at least one cultural event was more than double the number of people in the 65–74 age group.	<input type="radio"/>	<input type="radio"/>
Over 12 million people aged between 15 and 54 years attended at least one cultural event.	<input type="radio"/>	<input type="radio"/>

SECTION 2: CALCULATOR NOT AVAILABLE

There are 5 practice questions in section 2. The actual test has 13 questions in section 2.

BACKPACK MASS

On a 2-day walk, Tony wants to keep the mass of his full backpack to no more than 15% of his body mass. Tony's body mass is 80 kilograms.

Question 16

What is the maximum mass that Tony's full backpack should be?

_____ kilograms

CAKE TIME

Samantha plans to make a cake.

The recipe gives the following times:

- 35 minutes preparation
- 50 minutes baking
- 2 hours and 15 minutes cooling
- 45 minutes decorating

Question 17

According to the recipe, how long should it take to make the cake?

- A 3 hours and 45 minutes
- B 4 hours and 10 minutes
- C 4 hours and 25 minutes
- D 4 hours and 40 minutes

STUDY LOAD

The Equivalent Full-Time Student Load (EFTSL) is a measure of the study load, expressed as a fraction of a year, of a subject when taken by a full-time student.

For example, a subject with an EFTSL of 0.5 would be worth half of a normal full-time year of study.

Question 18

What fraction of a year of full-time study is a subject which has an EFTSL of 0.125?

- A $\frac{1}{4}$
- B $\frac{1}{8}$
- C $\frac{1}{25}$
- D $\frac{125}{100}$

LANGUAGE AT HOME

A recent census revealed that the number of people speaking an Australian Indigenous language at home increased from 63 754 in 2016 to 76 978 in 2021.

Question 19

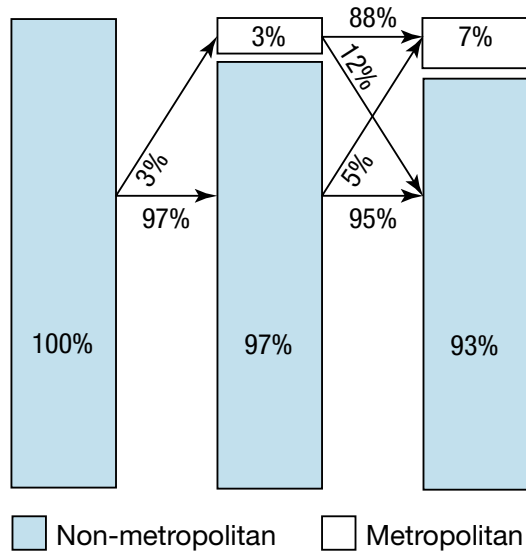
Which of the following is closest to the percentage increase from 2016 to 2021?

- A 10%
- B 20%
- C 30%
- D 50%

METROPOLITAN MOVEMENT

This diagram shows the movement of 5112 young people over 3 years. All of them were living in non-metropolitan areas in the first year of study.

In the second year, 3 per cent had moved to metropolitan areas and 97 per cent remained in non-metropolitan areas as shown by the arrows.



Question 20

Of the group living in non-metropolitan areas in the second year, what percentage moved to metropolitan areas in the **third** year?

_____ %

End of Numeracy practice questions.
Answers on next page.

Answers

Question 1	1
Question 2	C: 2020
Question 3	No, Yes
Question 4	24
Question 5	True, False, Unable to determine
Question 6	28
Question 7	\$11.20
Question 8	B: south-east
Question 9	C: 10-metre roll
Question 10	808
Question 11	90
Question 12	C: Thursday
Question 13	A: \$440
Question 14	B: 1 700 000
Question 15	False, True
Question 16	12
Question 17	C: 4 hours and 25 minutes
Question 18	B: $\frac{1}{8}$
Question 19	B: 20%
Question 20	5

