Numeracy Practice Test
Year 9

2010 Practice Test 2 – Calculator allowed

Student Details

First Name

Last Name

Today's Date is: _____

Test Instructions

You have 40 minutes to complete this test.

You are **allowed** to use a calculator.

You should use a pencil to write your answers or shade in the bubble.

If you make a mistake, rub it out thoroughly.

The following test has been designed by 3P Learning to prepare students for the National Assessment Program Numeracy Test. This test is to be used for revision purposes only. 3P Learning does not guarantee that the format of this test is the same as an actual test.

1 Calculate the answer:

4.13 x 0.07 =

Shade one bubble.

- ⬭ 0.2891
- ⬭ 0.3304
- ⬭ 2.891
- ⬭ 28.91
- ⬭ 33.04

2 Calculate the answer: $\frac{6 \times 5.14}{3 \times 10.1}$ = (correct to two decimal places)

Write the answer in the box.

3 The digits 4, 5 and 6 are substituted into the following equation:

2a **+** b **-** c **= 8**

If b is 4, the value of c is:

Shade one bubble.

4 $(5.2-3.6)^3 - \frac{32}{2.1 \times 14}$ is closest to:

Shade one bubble.

- ⬭ - 254
- ⬭ - 255
- ⬭ - 209
- ⬭ - 119
- ⬭ 3

5 The square root of 2 600 is between:

Shade one bubble.

- ⬭ 0 and 10
- ⬭ 10 and 20
- ⬭ 20 and 100
- ⬭ 100 and 1 000
- ⬭ 1 000 and 1 000 000

6 A test consists of 60 questions. It is structured so that each part of the English course is tested.

Comprehension: 24
Vocabulary: 9
Spelling: 12
Writing: 7
Grammar: 8

What is the ratio of Comprehension questions to Grammar questions?

- ⬭ 3:1
- ⬭ 4:1
- ⬭ 1:3
- ⬭ 1:4
- ⬭ 3:4

Shade one bubble.

7 A block of chocolate contains 35 small identical squares of chocolate arranged in equally sized rows.

If there are 7 columns, the number of rows in the block of chocolate is:

- ⬭ 2
- ⬭ 3
- ⬭ 4
- ⬭ 5
- ⬭ 6

Shade one bubble.

8 $a^x \times b^y = 675$

Shade one bubble.

a, x, b and y are all whole numbers.

If a = 5 and b = 3 then the values for x and y are:

- ◯ $x = 2$, $y = 3$
- ◯ $x = 3$, $y = 2$
- ◯ $x = 3$, $y = 5$
- ◯ $x = 2$, $y = 5$
- ◯ $x = 5$, $y = 2$

9 **K equals 3.25×10^2**

L equals 2.53×10^3

M equals 5.204×10^2

N equals 3.52×10^3

Shade one bubble.

List K, L, M and N in ascending order

- ◯ K, M, N, L
- ◯ N, M, L, K
- ◯ N, L, M, K
- ◯ K, M, L, N
- ◯ L, K, M, N

10 If $x = -4$ then $x^2 - 3x + 12$ is equal to:

Shade one bubble.

- ◯ -16
- ◯ 8
- ◯ 12
- ◯ 16
- ◯ 40

11 The difference between $\sqrt{8}$ and $\sqrt{2}$ is squared. The result is:

- ⬭ 1.96
- ⬭ 1.9881
- ⬭ 2
- ⬭ 5.96
- ⬭ 6

Shade one bubble.

12 Peter's plane leaves Melbourne airport at 10:00 am on Tuesday morning on its way to Los Angeles (USA). The flight takes a total of 13.5 hours. Los Angeles time is 17 hours behind Melbourne time.

What day and time will Peter's flight arrive in Los Angeles?

Write one number in the box.

13 How many edges are there on a cube?

Shade one bubble.

- ⬭ 4
- ⬭ 6
- ⬭ 8
- ⬭ 12
- ⬭ 16

14 An isosceles triangle has two angles equal to 25°. What is the size of the third angle?

Shade one bubble.

- ⬭ 25°
- ⬭ 50°
- ⬭ 155°
- ⬭ 130°
- ⬭ 180°

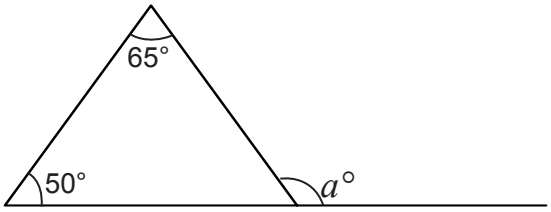
15 The rhombus ABCD has a perimeter of 43.12 cm.

Find the length of CD correct to 2 decimal places.

Shade one bubble.

- ⬭ 0.12 cm
- ⬭ 6.72 cm
- ⬭ 7.62 cm
- ⬭ 10.04 cm
- ⬭ 10.78 cm

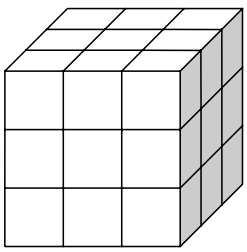
16 In the diagram shown below, the size of angle a is:



- ⬭ 180°
- ⬭ 115°
- ⬭ 130°
- ⬭ 125°
- ⬭ 65°

Shade one bubble.

17 A cube is constructed from 27 smaller cubes (as shown).



The **outside** of the cube is painted red.

How many of the smaller cubes will have exactly 2 sides painted?

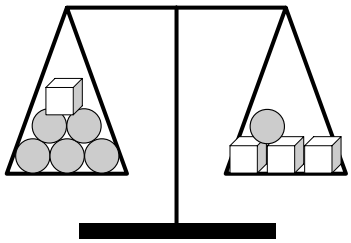
- ⬭ 2
- ⬭ 4
- ⬭ 8
- ⬭ 12
- ⬭ 16

Shade one bubble.

18 John is 3 years older than his sister Amber. The product of their ages is the same as their father's age. If John's father is 40 years of age, how old is Amber?

Write the answer in the box.

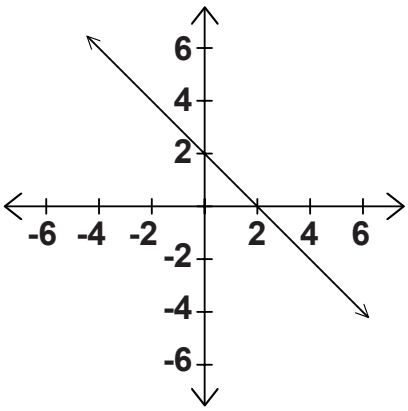
19 The scales shown in the picture are balanced. If the cubes weigh 65 grams each, how much do the spheres weigh?



Write the answer in the box.

20 The equation of the line is:

Shade one bubble.



- ◯ $y = x + 2$
- ◯ $y = 2x$
- ◯ $y = x - 2$
- ◯ $y = -2x$
- ◯ $y = -x + 2$

21 Tom is x years old. Jane is 7 years older than Tom.

Together their ages total 24.

Which equation represents this family's age structure?

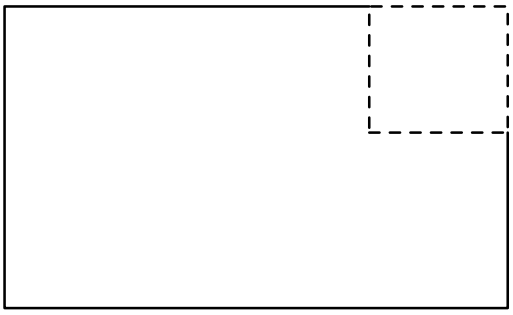
Shade one bubble.

- ◯ $2x + 7 = 24$
- ◯ $x + 7 = 24$
- ◯ $2x - 7 = 24$
- ◯ $x - 7 = 24$
- ◯ $2x = 7$

22 Find solution to the equation: $\frac{2x - 15}{7} = x + 5$

Write the answer in the box.

23 A rectangular sheet of paper measures 25 cm x 10 cm. A square of area 25 cm is cut from one corner of the rectangle. The perimeter of the larger piece of paper is:



- ◯ 25 cm
- ◯ 225 cm^2
- ◯ 35 cm
- ◯ 70 cm
- ◯ 60 cm

Shade one bubble.

24 The area of a square is 80 cm^2. How long is each side?

- ⬭ 4 cm
- ⬭ 8.94 cm
- ⬭ 9.48 cm
- ⬭ 20 cm
- ⬭ 40 cm

Shade one bubble.

25 Students in Mr. Finch's class had a total of $360.00 to spend at the school fete. Each student had on average $14.40. How many students are in Mr. Finch's class?

- ⬭ 15
- ⬭ 17
- ⬭ 20
- ⬭ 23
- ⬭ 25

Shade one bubble.

26 There are 26 students in Mrs Block's mathematics class: 14 girls and 12 boys.

6 students were late to class.

If 5 of the students late to class were boys, what is the ratio of Girls to Boys that were on time?

- ⬭ 14:12
- ⬭ 5:1
- ⬭ 9:11
- ⬭ 13:7
- ⬭ 26:5

Shade one bubble.

27 A triangle that is 25 cm high has an area of 50 cm^2. The base of the triangle measures:

- ⬭ 1 cm
- ⬭ 2 cm
- ⬭ 4 cm
- ⬭ 8 cm
- ⬭ 12 cm

Shade one bubble.

28 A bag contains 3 red marbles, 5 white marbles and 2 blue marbles. Two white marbles are drawn from the bag and not replaced.

What is the probability the next marble drawn will be white?

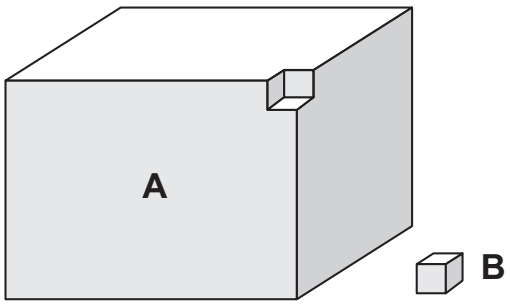
- ⬭ 5
- ⬭ 3
- ⬭ 0.5
- ⬭ 0.375
- ⬭ 0

Shade one bubble.

29 A solid piece of chocolate (A) measures 20 cm x 10 cm x 15 cm.

A 2 cm cube (B) has been cut from the original block.

The change in surface area for block A is:



Shade one bubble.

- ⬭ $8cm^2$ more surface area
- ⬭ $24cm^2$ more surface area
- ⬭ $24cm^2$ less surface area
- ⬭ No change in surface area
- ⬭ $8cm^2$ less surface area

30 Tony runs a small catering business that delivers snacks and lunches to local factories.

He asked his customers if they preferred sandwiches or wraps for lunch.

The results are shown in this table.

	Filling	Sandwiches	Wraps
Special 1	Ham and Green Salad	80	45
Special 2	Chicken and Garden Salad	68	32
Special 3	Tuna, Cheese and Tomato	35	50

What is the probability that for Special 3 (Tuna, Cheese and Tomato) a wrap will be chosen?

Write one number in each box.

- ⬭ $\frac{127}{310}$
- ⬭ $\frac{5}{31}$
- ⬭ $\frac{17}{62}$
- ⬭ $\frac{50}{127}$
- ⬭ $\frac{10}{17}$

END OF TEST