

**STUDENT TO COMPLETE**

Please print your first name and last name below. Write in capital letters.

FIRST NAME \_\_\_\_\_

LAST NAME \_\_\_\_\_

**TEACHER TO COMPLETE**

Please indicate if any of the following apply for this test session. The student was

- absent       exempt       withdrawn       sanctioned abandonment

Books for students in these categories **MUST NOT** be returned for processing.

**0:40**

**SESSION 2**

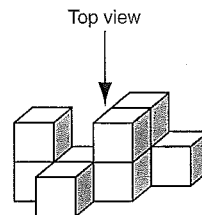
Time available for students  
to complete test: 40 minutes

Use 2B pencil  
**only**

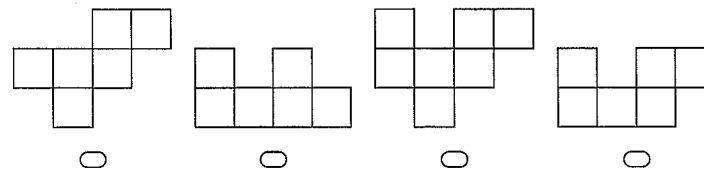
**YEAR 9 NUMERACY**

- 1 The object below is made from 9 cubes.

Shade one  
bubble.



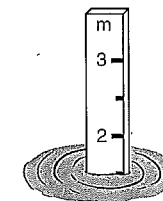
Which one of these shows the top view?



- 2 The probability of rolling a 3 on a standard six-sided die is

- $\frac{1}{2}$        $\frac{1}{3}$        $\frac{1}{6}$        $\frac{3}{4}$
- 

- 3 This pole measures the depth of water in a river.



Approximately how deep is the river?

- 15 centimetres      1.05 metres      1.5 metres      15 metres
- 



## YEAR 9 NUMERACY

- 4 Steven cuts his birthday cake into 8 equal slices. He eats 25% of the cake in whole slices.

How many slices of cake are left?

Write your answer in the box.



- 5 A number is multiplied by itself and then 9 is added. The answer is 13.

What is the number?

- 6 The area of this shaded rectangle is  $98 \text{ cm}^2$ .



7 cm (not to scale)

?

What is the length of the shaded rectangle?

 cm

- 7 Which is the best estimate for  $16 \times 34 + 68 - 91$ ?

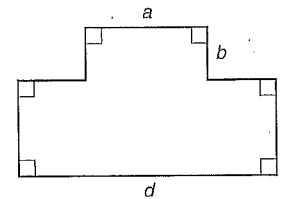
- $10 \times 30 + 60 - 90$   
  $10 \times 30 + 70 - 90$   
  $20 \times 30 + 70 - 90$   
  $20 \times 40 + 70 - 100$

Shade one bubble.



## YEAR 9 NUMERACY

- 8 Elly drew this floor plan of her school building.



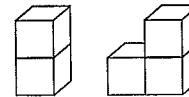
Shade one bubble.



Which expression gives the floor area of Elly's school building?

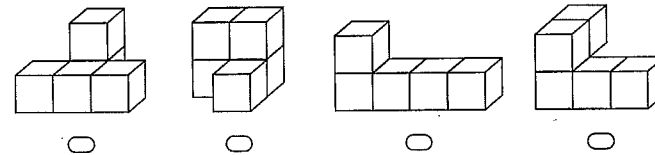
- $(a \times b) + (c \times d)$     
   $(a \times b) \times (c \times d)$     
   $(a + b) + (c + d)$     
   $(a + b) \times (c + d)$

- 9 Kevin made these 2 objects by gluing cubes together face-to-face.



He then joined the 2 objects together.

Which object below could **not** be made using Kevin's 2 objects?



- 10 A tin contains 15 green, 10 red, 7 black and 18 white jelly beans. Without looking, Jen takes one jelly bean from the tin.

What is the chance that the jelly bean is red?

- $\frac{1}{2}$     
   $\frac{1}{3}$     
   $\frac{1}{4}$     
   $\frac{1}{5}$



# YEAR 9 NUMERACY

11  $\sqrt{200}$  is between

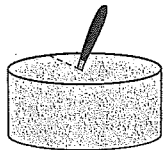
- 10 and 12      12 and 14      14 and 20      50 and 150

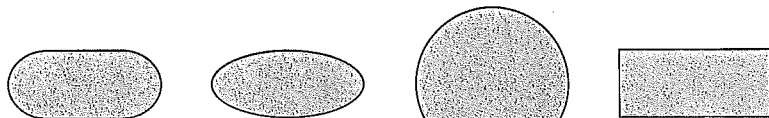
Shade one bubble.



12 A vertical cut is made with a knife all the way through the centre of a cylindrical cheese, as shown.



Which shows the shape of the cross-section made by the cut?



13 Which expression is equivalent to  $2 - 3t$ ?

- $3 - 2t$        $3t - 2$        $-2 + 3t$        $-3t + 2$

# YEAR 9 NUMERACY

14 Helen has 24 red apples and 12 green apples.

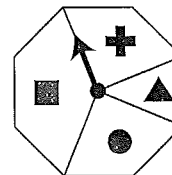
What fraction of the apples are green?

- $\frac{1}{2}$        $\frac{1}{3}$        $\frac{1}{4}$        $\frac{1}{12}$
- 

Shade one bubble.



15 Voula spins the arrow 100 times.



Which table is most likely to show her results?

| Shape section | Number of spins |
|---------------|-----------------|
| +             | 15              |
| ▲             | 10              |
| ●             | 15              |
| ■             | 60              |

| Shape section | Number of spins |
|---------------|-----------------|
| +             | 10              |
| ▲             | 25              |
| ●             | 25              |
| ■             | 40              |

| Shape section | Number of spins |
|---------------|-----------------|
| +             | 25              |
| ▲             | 10              |
| ●             | 25              |
| ■             | 40              |

| Shape section | Number of spins |
|---------------|-----------------|
| +             | 25              |
| ▲             | 25              |
| ●             | 25              |
| ■             | 25              |

16 Which expression is equal to  $5^3 \times 25^2$ ?

- $5 \times 3 \times 25 \times 2$
- $5 \times 5 \times 5 \times 5 \times 5$
- $5 \times 5 \times 5 \times 25 \times 5$
- $5 \times 5 \times 5 \times 5 \times 5 \times 5$

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## YEAR 9 NUMERACY

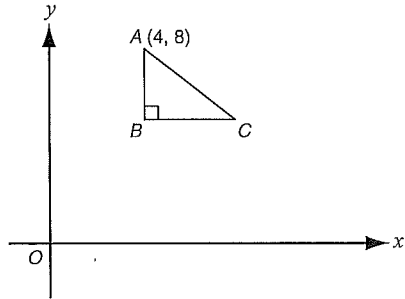
- 17** A copier prints 1200 leaflets.  
One-third of the leaflets are on yellow paper and the rest are on blue paper.  
There are smudges on 5% of the blue leaflets.  
How many blue leaflets have smudges?

Shade one bubble.



- 40       60       400       800

- 18** The coordinates of point  $A$  are  $(4, 8)$ .



$AB$  is parallel to the  $y$  axis.

If  $AB = 3$ ,  $BC = 4$  and  $AC = 5$ , what are the coordinates of point  $C$ ?

- $(8, 5)$         $(5, 8)$         $(1, 8)$         $(8, 1)$

- 19** Here is a set of 8 scores.

2, 4, 4, 9, 9, 12, 12, 60

What will change if score 60 is removed from the set?

- mean only  
 mean and median  
 mean and mode  
 mean and range

## YEAR 9 NUMERACY

- 20** Two numbers added together equal 1.  
The two numbers multiplied together equal  $-30$ .

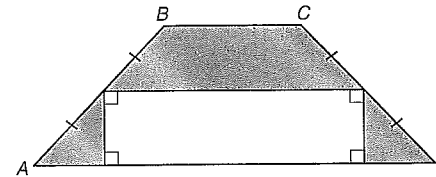
Write your answers in the boxes.

What are the two numbers?

and

- 21** The area of the rectangle in this diagram below is  $10 \text{ cm}^2$ .

Write your answer in the box.



What is the area of the trapezium  $ABCD$ ?

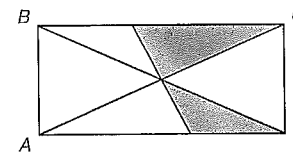
  $\text{cm}^2$ 

- 22** When  $m = 2$  and  $n = -2$ , what is the value of  $m^2 + n^2$ ?

$m^2 + n^2 =$

- 23**  $ABCD$  is a rectangle.

A line is drawn through the point where the two diagonals intersect.  
Two triangles are then shaded.



What fraction of the rectangle is shaded?



## YEAR 9 NUMERACY

- 24** The diameter of Jupiter is approximately 3 times the diameter of Neptune, 12 times the diameter of Venus and 21 times the diameter of Mars.

Shade one bubble.



About how many times larger is the diameter of Neptune than the diameter of Mars?

- 7       18       24       63

- 25** The petrol tank in Gina's car is empty. She buys \$72 worth of petrol at \$1.50 per litre. Her car uses 8 litres of petrol per 100 km travelled.

Which calculation gives the number of kilometres travelled before the tank is empty again?

- $72 \div 1.50 \times 8 \div 100$   
  $72 \div 1.50 \div 8 \times 100$   
  $72 \times 1.50 \div 8 \div 100$   
  $72 \times 1.50 \times 8 \times 100$

- 26** Which of these points lies on the straight line joining the points (4, 4) and (20, 12)?

- (5, 5)       (6, 6)       (10, 7)       (14, 8)

## YEAR 9 NUMERACY

- 27** A ticket costs \$75. A fee of 10% is added to the price.

Shade one bubble.



Which calculation will give the new price?

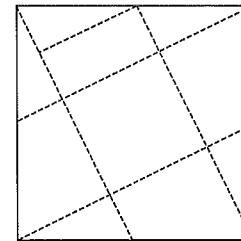
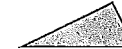
- $75 + 10$         $75 + 0.1$         $75 \times 0.1$         $75 \times 1.1$

- 28** A coin is tossed 3 times. There are 8 possible outcomes. What is the probability of getting 2 tails and 1 head in any order?

Write your answer in the box.




- 29** The entire top of a square table is tiled with triangular tiles like this one.



Altogether, how many triangular tiles are used?

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# YEAR 9 NUMERACY

30  $2(2x - 3) + 2 + \square = 7x - 4$

Write your answer in the box.

What term makes this equation true for all values of  $x$ ?

31 Which number has the largest value?

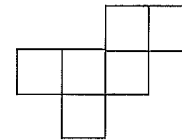
Shade one bubble.

- $\frac{1}{6}$        $\sqrt{0.04}$       0.18       $(0.4)^2$

**END OF TEST**

# NAPLAN Numeracy (non calculator) Year 9 2009 Quick Answers

1.



2.  $\frac{1}{6}$

3. 1.5 metres

4. 6

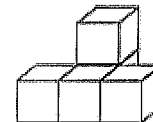
5. 2

6. 14 cm

7.  $20 \times 30 + 70 - 90$

8.  $(a \times b) + (c \times d)$

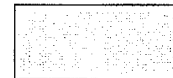
9.



10.  $\frac{1}{5}$

11. 14 and 20

12.



13.  $-3t + 2$

14.  $\frac{1}{3}$

15.

| Shape section | Number of spins |
|---------------|-----------------|
|               | 25              |
|               | 10              |
|               | 25              |
|               | 40              |

16.  $5 \times 5 \times 5 \times 5 \times 5 \times 5 \times 5$

17. 40

18. (8, 5)

19. mean and range

20. -5 and 6

21.  $20 \text{ cm}^2$

22. 8

23.  $\frac{1}{4}$

24. 7

25.  $72 + 1.50 + 8 \times 100$

26. (10, 7)

27.  $75 \times 1.1$

28.  $\frac{3}{8}$

29. 20

30.  $3x$

31.  $\sqrt{0.04}$

