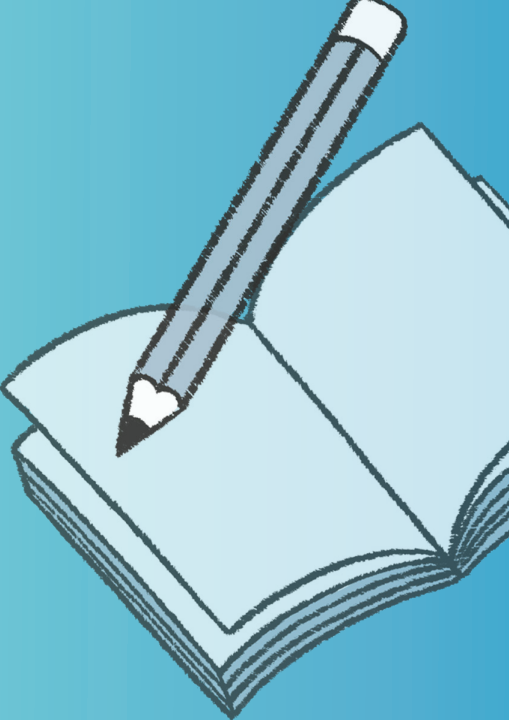
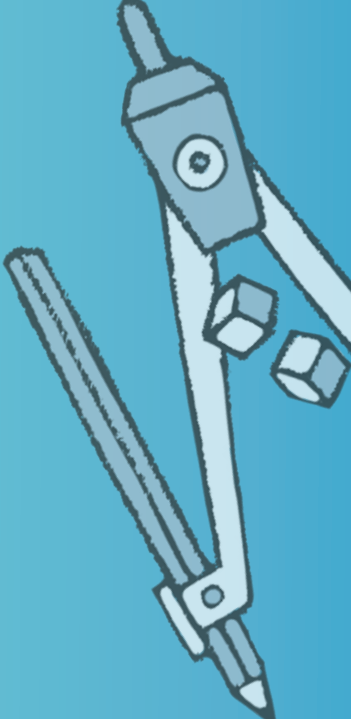




Mathematics

NAPLAN Year 9 Numeracy Test 3

(Calculator Allowed)



Year 9 Numeracy Practice Test 3 – Calculator Allowed

Student details

First name _____

Last name _____

Class _____ Date _____

Test instructions

You have 40 minutes to complete this test.

You are **NOT 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.

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1 Calculate 5.238×2.1425 and round to 3 decimal places.

Write the answer in the box.



2 Calculate the following and round to 3 decimal places.

$$\frac{18 \times 2.89}{6 \times 7.45}$$

3.338

7.177

0.859

64.592

1.164

Shade one bubble.

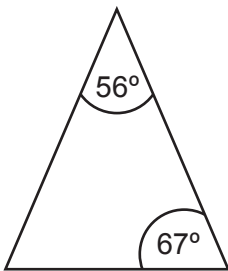


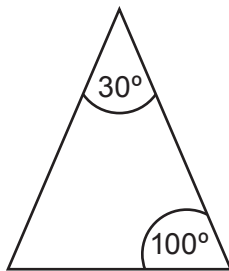
3 A bag contains only red and blue marbles. There are 48 marbles in total. What is the ratio of red marbles to blue marbles if there are 22 blue marbles in the bag?

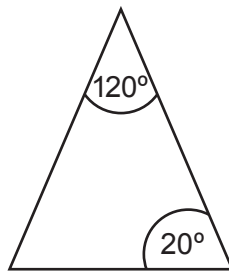
Write the answer in the box.

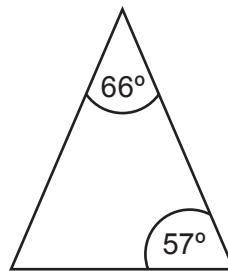


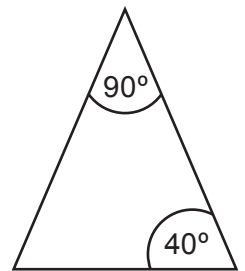
4 Which of the following triangles is not scalene?











Triangles not drawn to scale

Shade one bubble.



5 $7^y = 2401$

$y =$

Write one number in the box.



6 List the following numbers in ascending order of values:

$$E = 3.76 \times 10^4$$

$$F = 0.0386 \times 10^6$$

$$G = 5.92 \times 10^3$$

$$H = 0.3 \times 10^5$$

G, H, F, E F, G, H, E G, H, E, F F, E, H, G H, E, F, G

Shade one bubble.

7 The speed of light is 299 792 458 metres per second. What is a quarter of this speed rounded to the nearest million?

75 000 000

74 000 000

74 948 115

74 948 114

300 000 000

Shade one bubble.

8 Solve for x : $\frac{60x - 20}{16} = 4x - 2$

$x =$

Write one number in the box.

9 $5.4^2 + \sqrt{17}$ is closest to:

291

318

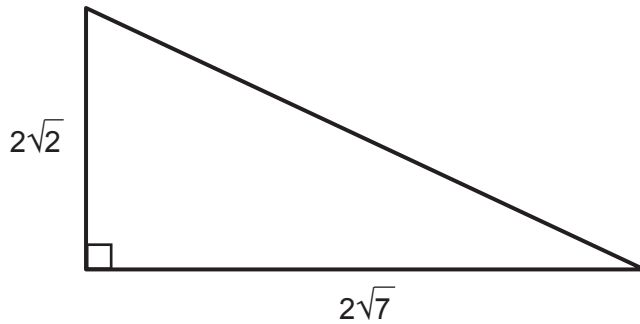
6

33

34

Shade one bubble.

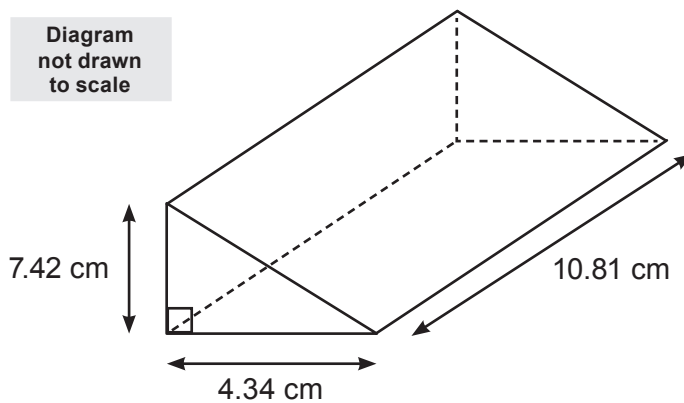
10 Calculate the length of the hypotenuse.



Write one number in the box.

11 Calculate the surface area of the following right-angled triangular prism. (Give your answer to 2 decimal places).

Diagram not drawn to scale


 cm²

Write the answer in the box.

12 The following prism has a volume of $1\,449\text{ cm}^3$. What is the height of the prism?

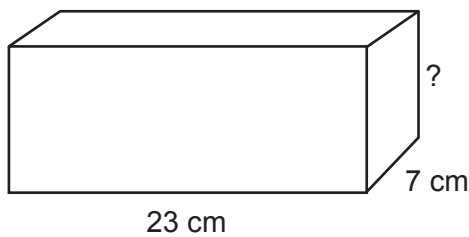


Diagram not drawn to scale

- 9 cm 441 cm 207 cm 20 cm 14 cm
-

Shade one bubble.

- 13** Ivan raised \$34 for a charity (the highest amount in his class). The rest of the class, made a total of \$756, at an average of \$28 per student. How many students are in Ivan's class?

27 28 22 26 126

Shade one bubble.



- 14** Adrian is attempting to solve an equation and the following is his working:

Line 1: $1 + 2(x + 7) = -5$

Line 2: $2(x + 7) = -6$

Line 3: $2x + 14 = -6$

Line 4: $2x = 8$

Line 5: $x = 4$

Did Adrian make a mistake? If he did, where did he make it?

No mistake Line 2 Line 3 Line 4 Line 5

Shade one bubble.



- 15** Kaitlyn enters a triathlon at school. In the triathlon she must swim, ride, and run.

She must swim for x metres. She has to run 3 times as far as she swims, and ride 5 metres more than she swims. If the total length of the triathlon is 1000 m, how far must she ride?

199 m 204 m 600 m 597 m 194 m

Shade one bubble.



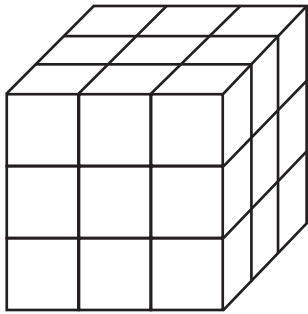
16 $\frac{5^6 \times 7^8}{5^3 \times 7^4} =$

$5^2 \times 7^2$ $5^2 \times 7^4$ $5^3 \times 7^2$ 5×7 $5^3 \times 7^4$

Shade one bubble.



17 The following shape is made of 27 small cubes. How many cubes are completely surrounded by other cubes on all sides?



- 1
- 2
- 3
- 4
- None

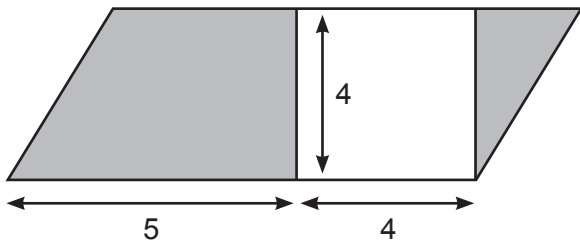
Shade one bubble.

18 What is the value of the following to the nearest whole number?

$$\frac{30.21 + 6.4^2}{\sqrt{5.16}}$$

Write one number in the box.

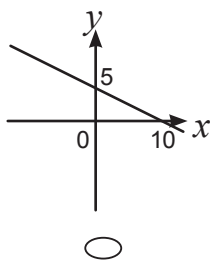
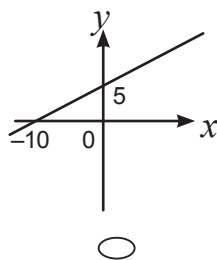
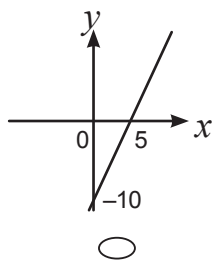
19 What is the area of the shaded sections in the following shape?



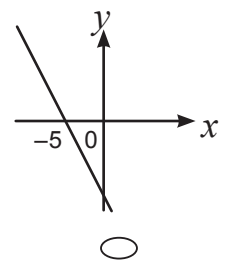
- 36 units²
- 20 units²
- 16 units²
- 18 units²
- 8 units²

Shade one bubble.

20 Which one of the following graphs represents $x + 2y = 10$

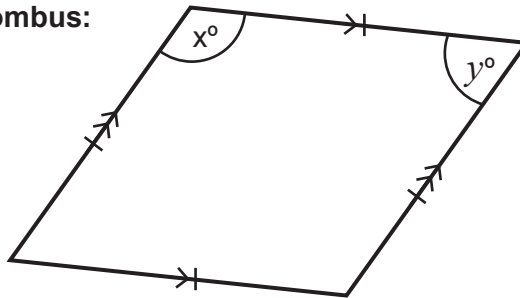


None



Shade one bubble.

21 This is the diagram of a rhombus:

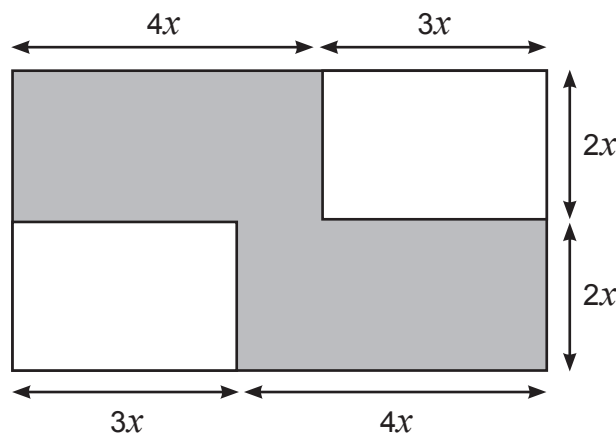


Which of the following are possible values for x and y ?

- $x = 56.6$ $y = 113.4$
- $x = 105$ $y = 85$
- $x = 105$ $y = 65$
- $x = 103.4$ $y = 76.6$
- $x = 89.3$ $y = 100.7$

Shade one bubble.

22 The shaded area of the following shape is 64 cm^2 . What is the value of x ?



- 8 cm
- 6 cm
- 12 cm
- 4 cm
- 2 cm

Shade one bubble.

23 The following table represents the probability of selecting certain colours of socks from a cupboard.

Colour of socks	Red	Blue	Green	Yellow	White
Probability	0.2	0.15	?	0.1	0.35


If these are the only colours of socks available, then what is the probability of selecting a green pair of socks?

Write one number in the box.

- 24 The following table displays the preferred sport for a certain school in each year. If a person was selected at random from all except the senior section, what is the probability they would be a Year 9 student who prefers tennis? (Round to 2 decimal places)

		Tennis	Soccer
Junior	Year 7	25	35
	Year 8	31	27
Middle	Year 9	22	40
	Year 10	33	22
Senior	Year 11	31	25
	Year 12	30	24

- 0.09 0.06 0.35 0.20 0.25
-

Shade one bubble. 

- 25 The following table displays the amount of people who ordered certain toppings on their pizza. What is the ratio of people who ordered onions to people who did not order onions?

Pizza toppings	Mushrooms	Tomato	Onions	Olives
Amount sold	80	120	40	60

- 2:1 2:13 2:15 13:2 1:2
-

Shade one bubble. 


- 26 The surface area of a cube is 24 cm^2 . How long is each side?

- 4 cm 1.59 cm 2 cm 2.45 cm 24 cm
-

Shade one bubble. 

27 Calculate the value of Q if $Q = \left(\frac{L}{P} - K^N \right)^{\frac{1}{M}}$

and $L = 120000$, $P = 2.98$, $K = 0.005$, $N = -2$. $M = 5$. Round off to 2 decimal places.

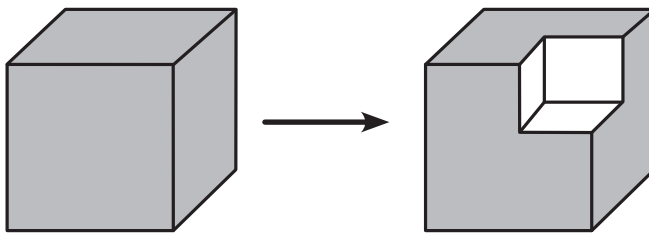
Write one number in the box. 

28 Tyler painted a pattern of which a third is blue, and a fifth is red, and a quarter is yellow. On his painting, what is the ratio of blue paint to yellow paint?

- 4:3 3:4 5:3 3:5 1:3
-


Shade one bubble. 

29 A 2 cm cube has a 1 cm cube removed from it, as demonstrated by the diagram.

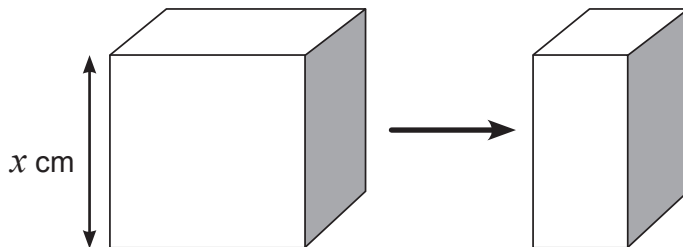


How much does this change the surface area?

- 8 cm² 1 cm² 4 cm² 0 cm² 2 cm²
-

Shade one bubble. 

30 The cube below is cut in half.



If $x = 2$ cm, what is the surface area of the new shape?

- 8 cm² 4 m² 24 cm² 12 cm² 16 cm²
-

Shade one bubble. 

END OF TEST

Working out space

