

1 Calculate the answer:

$$4.13 \times 0.07 =$$

0.2891

0.3304

2.891

28.91

33.04

Shade one bubble.



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

1.02

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:

6

Shade one bubble.



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

- 254

- 255

- 209

- 119

3

Shade one bubble.



5 The square root of 2600 is between:

Shade one bubble. 

0 and 10

10 and 20

20 and 100

100 and 1000

1000 and 1000 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 $a^x \times b^y = 675$

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

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

$x = 2$
 $y = 3$

$x = 3$
 $y = 2$

$x = 3$
 $y = 5$

$x = 2$
 $y = 5$

$x = 5$
 $y = 2$

Shade one bubble.



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

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

Shade one bubble.



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

-16

8

12

16

40

Shade one bubble.



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?

Tuesday 6:30 am

Write one number in the box.



13 How many edges are there on a cube?

- 4 6 8
- 12 16

Shade one bubble.



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

- 25° 50° 155°
- 130° 180°

Shade one bubble.



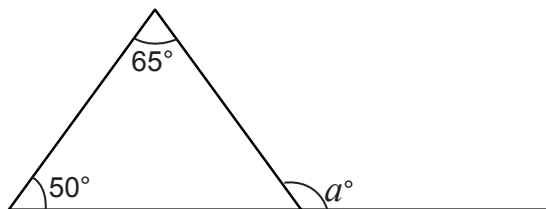
15 The rhombus ABCD has a perimeter of 43.12 cm.

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:



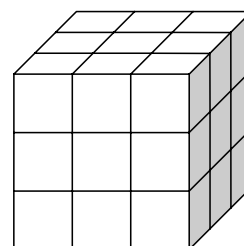
- 180° 115° 130°
- 125° 65°

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. 

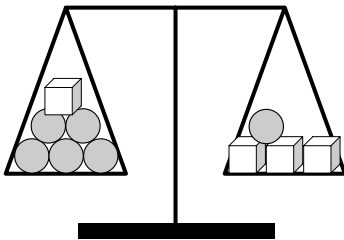
- 18 John is 3 years older than his sister Amber. The product of their ages is the same as their father's age. If John's father is 40 years of age, how old is Amber?

5

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?



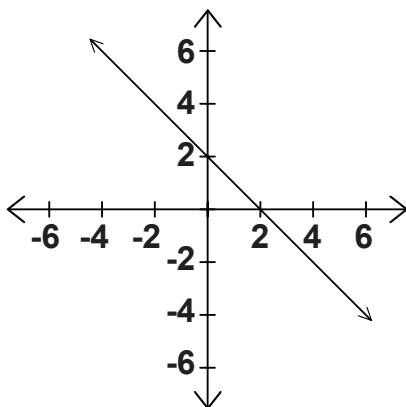
32.5 g

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?


$2x + 7 = 24$

$x + 7 = 24$

$2x - 7 = 24$


$x - 7 = 24$

$2x = 7$

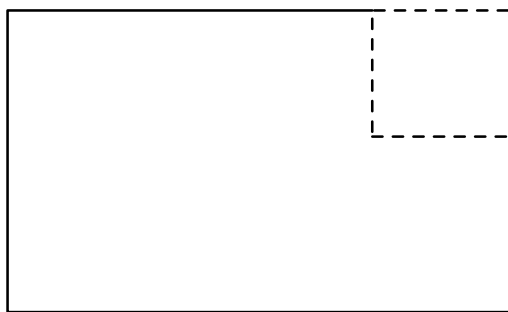
Shade one bubble. 

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

$x = -10$

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.

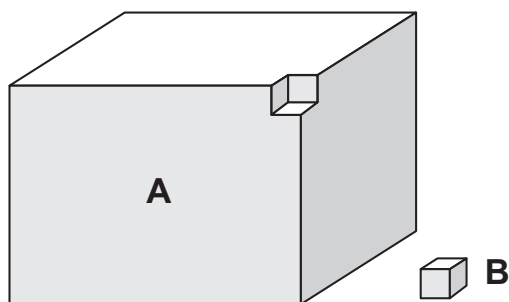
What is the probability the next marble drawn will be white?

- 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. 

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

$\frac{127}{310}$

$\frac{5}{31}$

$\frac{17}{62}$

$\frac{50}{127}$

$\frac{10}{17}$

Write one number in each box.



END OF TEST

1 Which of the following numbers does not have 2, 3 and 5 as its factors?

Shade one bubble. 

- 30 85 60
 90 120

2 Which of the following numbers is prime?

Shade one bubble. 

- 2 4 9
 27 49


3 What is the middle number when these numbers are arranged in ascending order?

Shade one bubble. 

- 5.306 -5.4 -5.36
 -5.04 -5.3

4 The temperature in the freezer is kept at -16°C . If the room temperature is 14.3°C , what is the difference between these temperatures?

$^{\circ}\text{C}$

Write the answer in the box. 

5 $16 \div 0.2 =$

Shade one bubble. 

- 3.2 8 32
 80 800

- 6 A laboratory experiment was completed at 10:05am after taking 2 hours and 43 minutes.
When was the experiment started?

7:22 am

Write the answer
in the box.



- 7 $(5 \times 100) + (6 \times \frac{1}{10}) + (3 \times 1) + (8 \times \frac{1}{100}) + (7 \times 10)$ is equal to:

 573.68

 57.368

 57368

 5736.8

 563.87

Shade one bubble.



- 8 Which of the following fractions is closest to $\frac{1}{2}$?

(None of them are EQUAL to $\frac{1}{2}$)

 $\frac{236}{568}$
 $\frac{491}{812}$
 $\frac{368}{732}$
 $\frac{268}{134}$
 $\frac{458}{792}$

Shade one bubble.



- 9 Which one of the following would produce the largest answer:

 $10 \div 0.1$
 10×0.1
 $10 + 0.1$
 $10 - 0.1$


Shade one bubble.



10 I counted the jelly beans in a small packet and found 6 white, 7 red, 4 yellow and 3 black jelly beans.

What is the ratio of the black ones to the yellow jelly beans?

- 1 : 4 3 : 4 3 : 7
 3 : 17 3 : 20

Shade one bubble. 

11 I counted the jelly beans in a small packet and found 6 white, 7 red, 4 yellow and 3 black jelly beans.


What is the percentage of the jelly beans that are not black?

- 15% 20% 30%
 35% 85%

Shade one bubble. 


12 $(\sqrt{188 + 37})^2$ is equal to:

- 12 X 12 13 X 13 14 X 14
 15 X 15 16 X 16

Shade one bubble. 

13 The value of $\sqrt{5000 - 200}$ is closest to:

- 50 60 70
 80 240

Shade one bubble. 

- 14 If a computer file repair process is successful 5 out of 7 times, find its percentage success rate (round to the nearest %):

71%

Write the answer in the box.



- 15 Toby loves making models of buildings, especially skyscrapers. He is very proud of his model of a tower that measures 25 cm. His friend Harry has dared him to make a larger model of the same building so that the new one is in the ratio of 3:2.

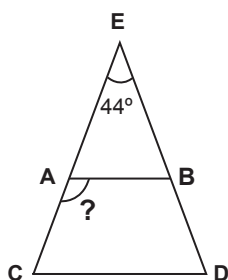
How tall will the new model be?

- 30 cm 32.5 cm 35 cm
 37.5 cm 40 cm

Shade one bubble.



- 16 In the isosceles triangle ECD, the line AB is parallel to CD. If $\angle E$ is 44° $\angle BAC$ measures



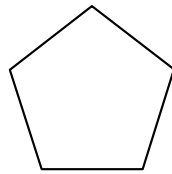
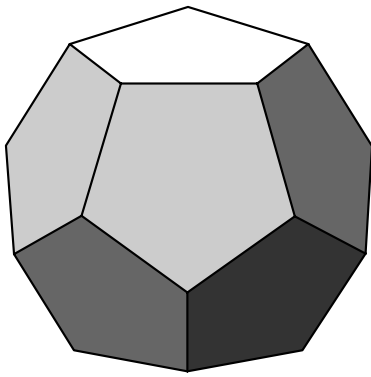
- 44° 68° 88°
 112° 122°

Shade one bubble.



- 17 A dodecahedron consists of identical, regular pentagons on each face. The area of one of these pentagons is 25cm^2 .

What is the total surface area of the dodecahedron?

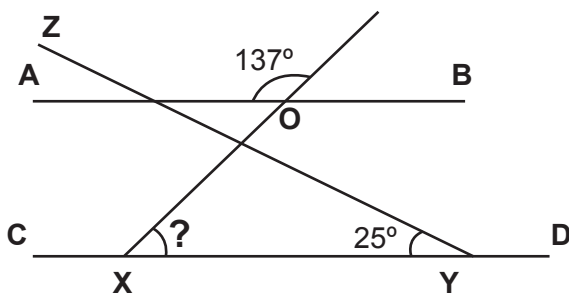


Area = 25cm^2

- 25cm^2 150cm^2 250cm^2
 300cm^2 625cm^2

Shade one bubble.

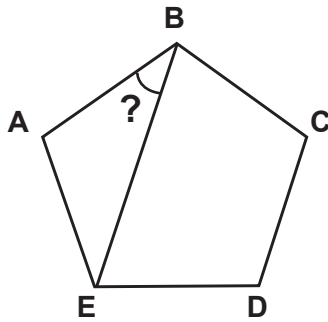
- 18 AB and CD are parallel lines that are cut by ZY and OX. Find the value of $\angle OXY$.



- 25° 43° 57°
 137° 143°

Shade one bubble.

- 19 ABCDE is a regular pentagon. A line is drawn from B to E.
What is the size of $\angle ABE$?



- 36° 54° 72°
 108° 144°

Shade one bubble.

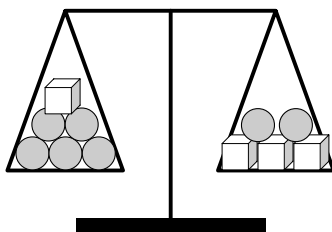
- 20 John is 2 years older than his sister Amber. Amber is only half of her father's age.

If Amber's father is 50 years old, how old is John?

27

Write the answer in the box.

- 21 The scales shown in the picture are balanced. If cubes weigh 150 grams each, how much do the spheres weigh?



- 50 75 100
 125 150

Shade one bubble.

22 $\frac{2x + 5}{3} = 30$, the value of x in this equation is:

5

7.5

40


42.5

50

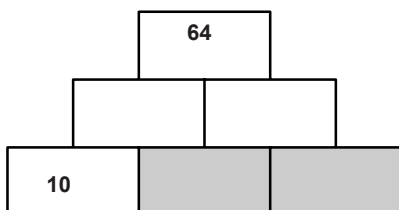
Shade one bubble. 

23 The solution to the equation: $3x + 5 = 7x - 11$ is:


$x =$

Write the answer in the box. 

24 Each brick is equal to the sum of the bricks it is sitting on. The two grey bricks on the bottom of the pile have exactly the same value. Determine the value of a grey brick.



Grey brick =

Write the answer in the box. 

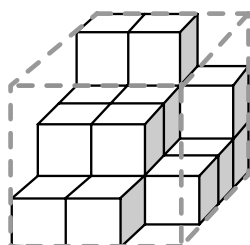
25 $\frac{2x + 5}{3} = 5x + 6$, the value of x in this equation is:

-1

Write the answer in the box.

26 Shirley has been unpacking a container of boxes. The contents of the container are shown in the diagram.

If the container was full, how many boxes has she unpacked so far?



- 10 16 20
 36 42

Shade one bubble.

27 The colours of 20 cars in a car park were observed. There were 5 black, 2 navy, 6 grey, 3 red and the rest were white.


What is the probability that one of these 20 cars, selected at random, is white?

- $\frac{1}{4}$ $\frac{1}{10}$ $\frac{3}{10}$
 $\frac{3}{20}$ $\frac{1}{5}$

Shade one bubble.

- 28 A farmer feeds hay and grain to his cattle during the winter months. He buys 3 tonnes of grain each week and allows 20 kg for each cow per day.

What is the maximum number of cows he can feed?


Shade one bubble. 

- 3 cows 7 cows 9 cows
 21 cows 23 cows

- 29 ABC is a right-angled with side AB = 12 cm and the hypotenuse AC = 20 cm.

What does BC measure?

- 8 cm 10 cm 12 cm
 14 cm 16 cm

Shade one bubble. 

- 30 Papex Pty Ltd produce paper tissues in boxes shaped as rectangular prisms.

These boxes have dimensions of 16 cm by 5 cm by 4 cm.

They plan to pack these boxes in a 10-box plastic-covered module to sell to shops.

What is the volume of this module?

Shade one bubble. 

- 144 cm³ 250 cm³ 320 cm³
 1440 cm³ 3200 cm³

END OF TEST