2004 AUSTRALASIAN SCHOOLS

YEAR 6

MATHEMATICS ASSESSMENT

AUSTRALIA

40 QUESTIONS
TIME ALLOWED: 1 HOUR

STUDENT'S NAME:

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED.

Read the instructions on the **ANSWER SHEET** and fill in your **NAME, SCHOOL YEAR, GENDER** and the **LANGUAGE YOU FIRST SPOKE.**

QUESTIONS 1–35: MULTIPLE CHOICE
Use the information provided to choose the **BEST** answer from the four possible options.
On your **ANSWER SHEET** blacken the oval that matches the answer you choose.
Mark only **ONE** answer for each question.

QUESTIONS F1–F5: FREE RESPONSE
On your **ANSWER SHEET** write your answer in the boxes provided.

Your score will be the number of correct answers.
Marks are **NOT** deducted for incorrect answers.

Use a 2B or B pencil.
Do **NOT** use a biro or pen.
Rub out any mistakes completely.
You may use a ruler and spare paper.
Calculators are **NOT** permitted.

THE UNIVERSITY OF NEW SOUTH WALES

EDUCATIONAL TESTING CENTRE

1. This table shows information about four dog breeds.

Breed	Size	Energy Level	Coat Length
Jack Russell 	small	high	short
Collie 	large	high	long
Pug 	medium	low	short
Maltese 	small	low	long

Which dog breed is small and has a long coat length?

(A) Jack Russell
(B) Collie
(C) Pug
(D) Maltese

2. Here is a pattern.

Which four symbols come next in the pattern?

(A) 
(B) 
(C) 
(D) 

3. 358 + 246 = ?

(A) 504
(B) 594
(C) 604
(D) 694

4. Gemma created a spreadsheet to list information about her friends.

	A	B	C	D
1	Surname	First Name	Address	Email
2	King	Joe	123 Humour Rd	joek@maill.com
3	Leigh	Sarah	45 Dessert St	yum@otpus.com
4	Donald	Ronald	678 Pickle Ave	burger@otpus.com
5	Ver	Claire	9 Bright St	smarty@maill.com

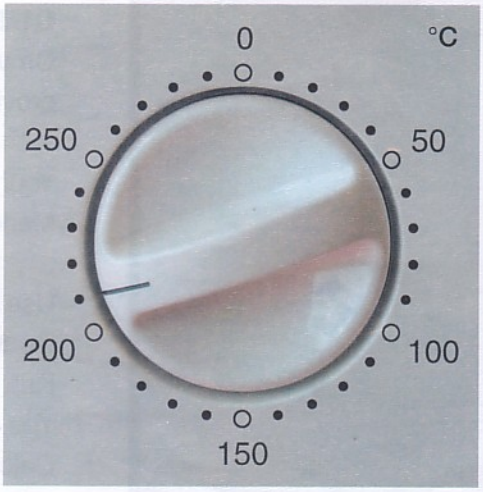
Which one of these contains the first name of one of Gemma's friends?

(A) A1
(B) B5
(C) C2
(D) D4

5. This table shows different oven settings.

Oven Setting	Temperature (°C)
very slow	130 – 150
slow	150 – 190
moderate	190 – 220
hot	220 – 260
very hot	260 – 290

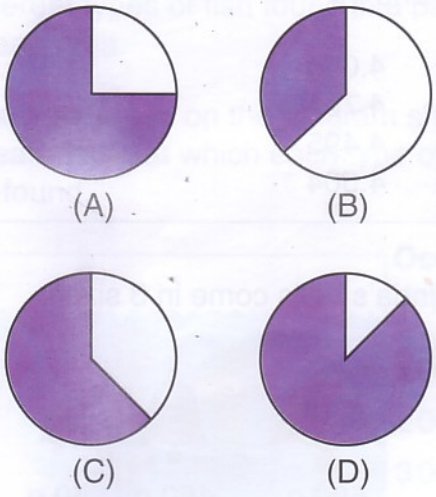
This diagram shows an oven dial.



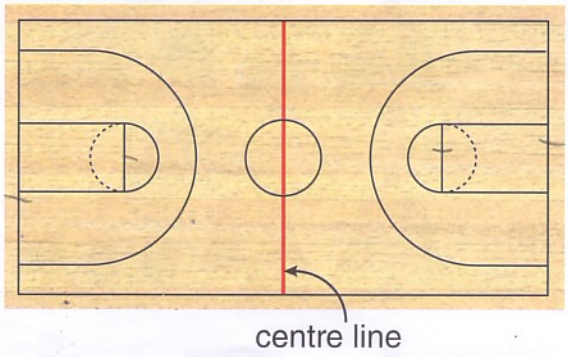
What is this oven's setting?

(A) very slow
(B) slow
(C) moderate
(D) hot

6. Which circle is 75% shaded?



7. This is a drawing of a basketball court.



How many black lines in this drawing are parallel to the red centre line?

(A) 2
(B) 3
(C) 4
(D) 5

8.

What is the time shown on the clock?

(A) nine o'clock
(B) quarter to eleven
(C) quarter to twelve
(D) twelve forty-five

9. What is one-quarter expressed as a percentage?

(A) 25%
(B) 40%
(C) 60%
(D) 75%

10. 873 – 429 = ?

(A) 354
(B) 444
(C) 454
(D) 456

11. Scott has $10 for lunch.

Juice	Burger	Ice Cream	Pizza
$1.50	$5.50	$2.50	$4.50

Which three items together cost closest to $10?

(A) Burger, Pizza and Ice Cream
(B) Burger, Pizza and Juice
(C) Juice, Ice Cream and Pizza
(D) Juice, Ice Cream and Burger

12. Here is a square.

Which of these names does **not** match this square?

(A) parallelogram
(B) pentagon
(C) quadrilateral
(D) rectangle

13. Which of these fractions has the largest value?

(A) $\frac{1}{100}$ (B) $\frac{1}{4}$ (C) $\frac{1}{2}$ (D) $\frac{1}{10}$

14. Butterflies are symmetrical.


Here is a picture of half a butterfly.

Which of these is the other half?


(A)


(B)

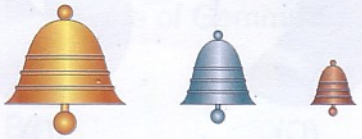

(C)


(D)

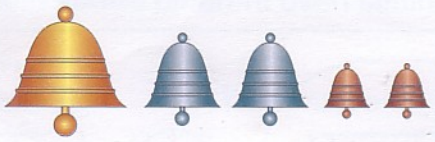
15. Which of these numbers is between 4.5 and 4.7?

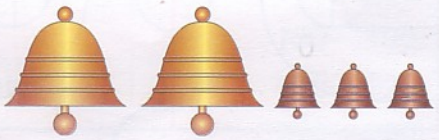
(A) 4.065
(B) 4.701
(C) 4.495
(D) 4.504

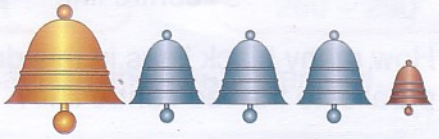
16. Belinda's bells come in 3 sizes.

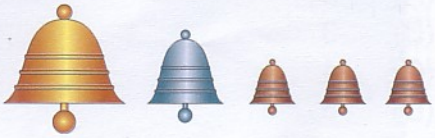


Which combination of bells has a mass of 1 kg?

(A) 

(B) 

(C) 

(D) 

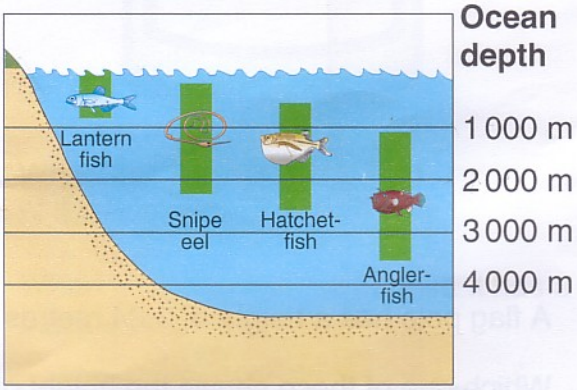
17. A country won 149 medals at the Sydney 2000 Paralympic Games. This total included 39 silver and 47 bronze medals. The rest were gold medals.

How many gold medals did this country win?

(A) 63
(B) 86
(C) 110
(D) 143

18. This diagram shows information about different types of fish found in a particular ocean area.

The green bars on the diagram show the ocean depth at which each type of fish can be found.



At which ocean depth are three of these different types of fish likely to be found?

(A) 1 000 m
(B) 2 000 m
(C) 3 000 m
(D) 4 000 m

19. $33 \times 28 = ?$

(A) 168
(B) 330
(C) 824
(D) 924

20. In Tim's class there are:

- 3 ten-year-old girls
- 4 ten-year-old boys
- 6 eleven-year-old girls
- 2 eleven-year-old boys.

The teacher picks one student at random.

Which of these does the teacher have the greatest chance of picking?

(A) a girl
(B) a boy
(C) a ten-year-old
(D) an eleven-year-old

21. Sue had this image on her computer.

Sue changed the image so that it appeared as shown below.

How has the original image been changed?

(A) It has been turned only.
(B) It has been enlarged only.
(C) It has been turned and flipped only.
(D) It has been enlarged and flipped only.

22. In magic squares the total of the numbers in each column, each row and each diagonal is the same.

Here is an incomplete magic square.

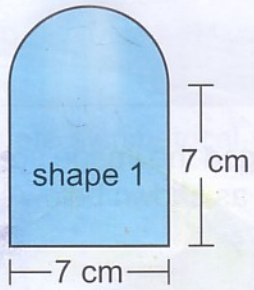
12	17	
19		?
14		18

What number goes in the red shaded box?

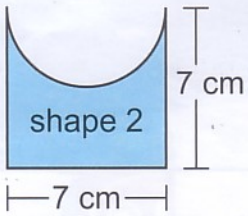
(A) 11
(B) 13
(C) 15
(D) 16

23. Shape 1 is made by joining a square and a semicircle.

The area of shape 1 is about 70 cm^2.



Shape 2 is made by removing the semicircle from the square.



What is the approximate area of shape 2?

(A) 20 cm^2
(B) 30 cm^2
(C) 50 cm^2
(D) 70 cm^2

24. A tree casts a shadow on the ground.

The length of the shadow is 25% of the height of the tree.

The height of the tree is 20 metres.

What is the length of the shadow, in metres?

(A) 80
(B) 25
(C) 15
(D) 5

25.

A flag pole has a height of 3.24 metres.

Which one of these shows the height of the flag pole?

(A) 3 m + 2 cm + 4 mm
(B) 3 m + 20 cm + 4 mm
(C) 3 m + 20 cm + 40 mm
(D) 3 m + 200 cm + 40 mm

26. Four people in a family compare their heights with the height of a door.

Nick is $\frac{3}{4}$ of the height of the door.

Julie is $\frac{2}{3}$ of the height of the door.

Finn is $\frac{1}{2}$ of the height of the door.

Celia is $\frac{1}{4}$ of the height of the door.

Which person is two-thirds the height of one of the other people?

(A) Nick
(B) Julie
(C) Finn
(D) Celia

27.

When this tin is full of paint it has a mass of 4.6 kg.

When this tin is half full of paint it has a mass of 2.4 kg.

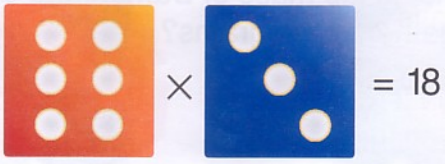
What is the mass of this tin when it is one-quarter full of paint?

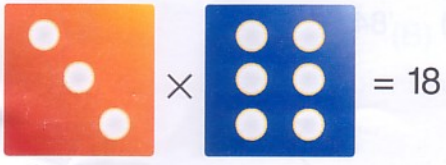
(A) 2.2 kg
(B) 1.3 kg
(C) 1.2 kg
(D) 1.1 kg

28. Carlo rolls two dice and finds the product of the two numbers.

There are two different ways he can roll the dice to get a product of 18.

For example:



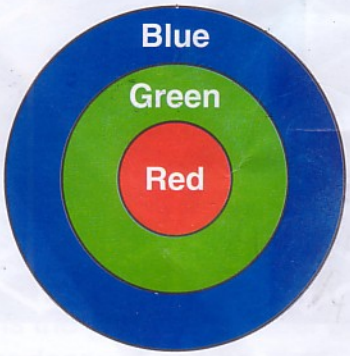


How many different ways can he roll the dice to get a product **less** than 10?

(A) 10
(B) 17
(C) 19
(D) 21

29. In this target, Green is worth twice as many points as Red. Blue is worth twice as many points as Green.

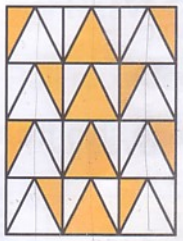
Phil throws three darts and lands one in each colour. He scores 28 points.



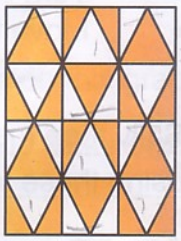
How many points is Blue worth?

(A) 4
(B) 7
(C) 14
(D) 16

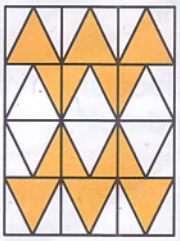
30. Which design has the **smallest** area shaded orange?



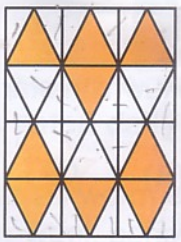
(A)



(B)

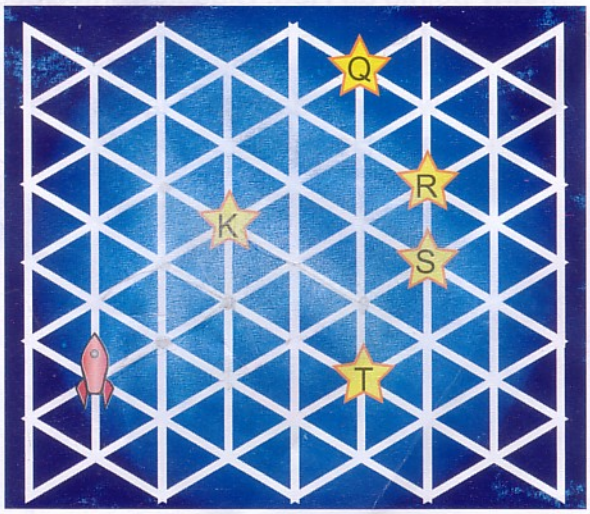


(C)



(D)

31. Sally is playing a game on this board.



In the game the space ship visits stars by moving along the white lines.

Sally moves the space ship to K using these instructions.

- Turn clockwise 60°
- Move forward 2 units
- Turn anticlockwise 60°
- Move forward 1 unit

Sally then moves the space ship **from** K using these instructions.

- Turn anticlockwise 240°
- Move forward 2 units
- Turn clockwise 300°
- Move forward 1 unit

At which star does the space ship finish?

(A) Q

(B) R

(C) S

(D) T

32. A truck travelling along a road was photographed by 5 safety cameras.

These cameras were spaced a distance of 50 km apart from each other.

Safety Camera	Time Photographed
1	8:45 am
2	9:10 am
3	9:50 am
4	10:20 am
5	10:55 am

Between which safety cameras did the truck travel at an average speed of **more** than 100 km per hour?

(A) 1 and 2
(B) 2 and 3
(C) 3 and 4
(D) 4 and 5

33. Three children weigh themselves.

Maggie and Damen together have a mass of 87 kg.

Cosima and Maggie together have a mass of 93 kg.

All three children together have a mass of 132 kg.

What is the mass of Damen and Cosima together, in kilograms?

(A) 92
(B) 90
(C) 88
(D) 84

34. Alice wants to build a fence around her rectangular guinea pig pen.

NOT TO SCALE

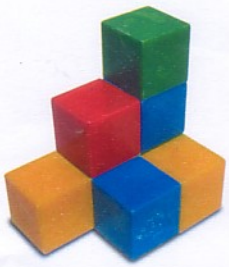
She has 360 cm of fencing.

What width will give the largest area?

(A) 120 cm
(B) 90 cm
(C) 80 cm
(D) 30 cm

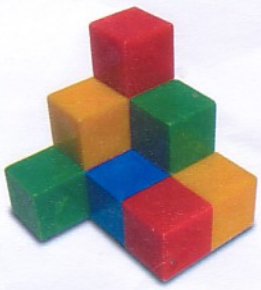
35. Maria glued some cubic blocks together to make three separate solids. These three solids fit together to make a larger cube.

Which of these is **not** one of Maria's solids?



(A)

(B)

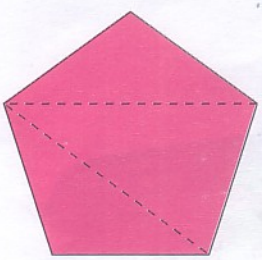


(C)

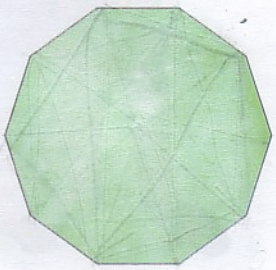
(D)

QUESTIONS F1 TO F5 ARE FREE RESPONSE.

F1. A regular pentagon can be divided into 3 triangles by drawing diagonals that do not cross each other.



pentagon



decagon

What is the greatest number of triangles a regular decagon can be divided into using diagonals that do not cross each other?

(Write only the number on your answer sheet.)

F2. Rafi recorded how many leaves his silkworm ate each day over a three-week period.

He found that the silkworm ate four to eight leaves a day.

Rafi recorded his results on this graph.

How many leaves did the silkworm eat altogether over the three-week period?

(Write only the number on your answer sheet.)

F3. A zookeeper had some peanuts for the monkeys.

He gave each monkey 4 peanuts and had 2 peanuts left over.

To give each monkey 6 peanuts, he would need another 22 peanuts.

How many monkeys are in the zoo?

(Write only the number on your answer sheet.)

F4. Talia had two identical pies.

She cut the first pie into 6 equal pieces.

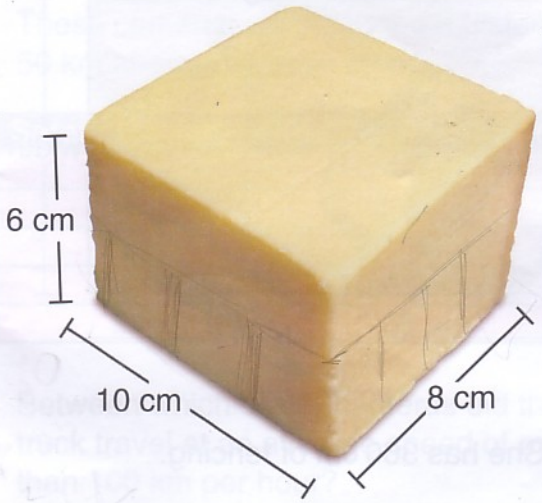
She cut the second pie into 8 equal pieces.

The mass of each piece of the first pie was 40 grams more than the mass of each piece of the second pie.

What was the mass of each pie, in grams?

(Write only the number on your answer sheet.)

F5. Andrew has a rectangular block of cheese measuring 10 cm × 8 cm × 6 cm.



Andrew wants to cut the cheese into small rectangular pieces measuring 3 cm × 3 cm × 2 cm.
He wants as many pieces as possible.
This means he will have some cheese left over.

What is the greatest number of pieces measuring 3 cm × 3 cm × 2 cm that Andrew can get from the block of cheese?

(Write only the number on your answer sheet.)

END OF PAPER