2005 AUSTRALASIAN SCHOOLS

AUSTRALIA Y7

PACIFIC Y7

NEW ZEALAND Y8

MATHEMATICS ASSESSMENT

40 QUESTIONS
TIME ALLOWED: 1 HOUR

STUDENT'S NAME:

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED.

Read the instructions on the **ANSWER SHEET.**
Fill in your **NAME, SCHOOL YEAR** and **OTHER INFORMATION.**

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

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

You may use a ruler and spare paper.
You are **NOT** allowed to use a calculator.

Use a 2B or B pencil.
Do **NOT** use a pen.
Rub out any mistakes completely.

Your score will be the number of correct answers.

THE UNIVERSITY OF NEW SOUTH WALES

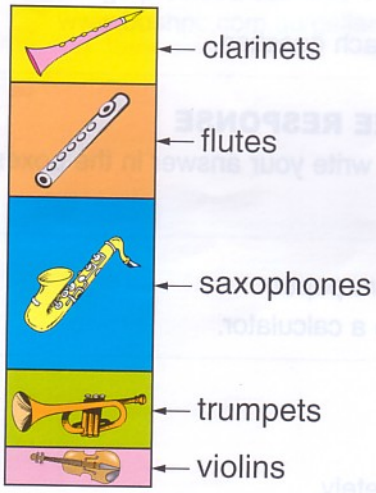
EDUCATIONAL ASSESSMENT AUSTRALIA

1. The octopus in this photo has 8 arms.

How many arms would 12 octopuses have altogether?

(A) 96
(B) 86
(C) 26
(D) 20

2. There are five types of instruments in a school band. This graph shows how many instruments there are of each type.



Total = 25

For which two types are there the same number of instruments?

(A) saxophones and violins
(B) trumpets and clarinets
(C) flutes and trumpets
(D) clarinets and flutes

3. This is a picture of an adult elephant.

Which of these is the best estimate for the mass of the elephant in kilograms?

(A) 5
(B) 50
(C) 5 000
(D) 50 000

4. What is the missing number?

$93 + \boxed{?} = 102$

(A) 9
(B) 11
(C) 19
(D) 195

5. The bird in this photo is 98.4 centimetres tall.

How tall is this bird, measured to the nearest centimetre?

(A) 100
(B) 99
(C) 98
(D) 90

6. Which one of these shapes contains exactly two 90° angles?

(A)

(B)

(C)

(D)

7. $6^2 =$?

(A) 8
(B) 12
(C) 36
(D) 62

8. Jack has cut out a triangle from this picture.

Which of these is the triangle he cut out?

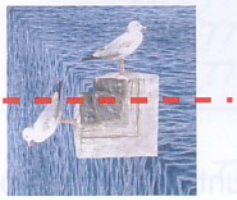
(A)

(B)

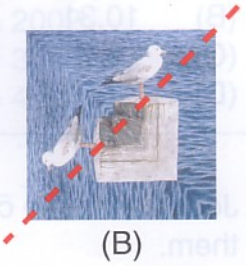
(C)

(D)

9. In which of these pictures is the dotted line a line of symmetry?



(A)



(B)

(C)

(D)

10. Clara made this object.

Which of these could be a picture of the same object?

(A)

(B)

(C)

(D)

11. Which of these numbers is closest to 10?

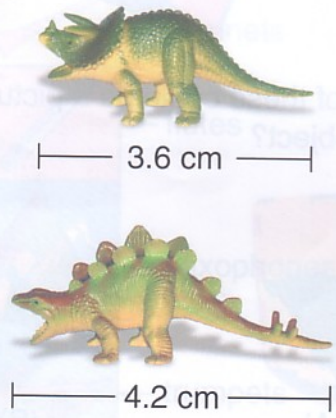
(A) 10.4
(B) 10.31
(C) 9.7
(D) 9.59

12. Josh has these counters with numbers on them.

How many of the numbers are multiples of 7?

(A) 3
(B) 4
(C) 5
(D) 6

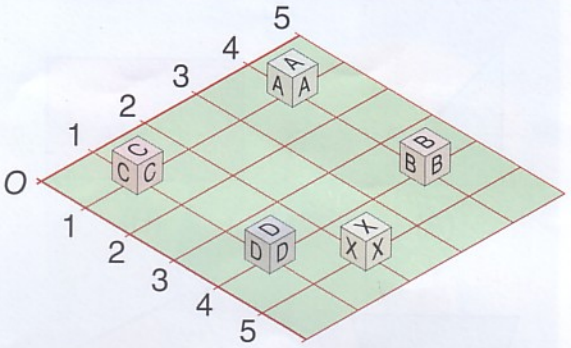
13. The picture shows the length of two toy dinosaurs.



What is the difference between the two lengths?

(A) 1.6 cm
(B) 1.4 cm
(C) 0.6 cm
(D) 0.4 cm

14. Block  is at (5, 2).



Which block is at (4, 1)?


(A)


(B)

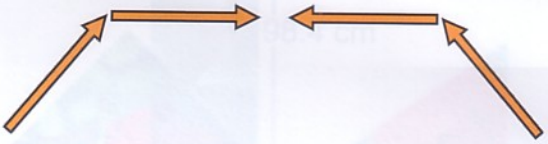

(C)


(D)

15. Lien walked northeast for one kilometre and then west for one kilometre.

Which of these diagrams shows the direction of Lien's walk?


(A) (B)


(C) (D)

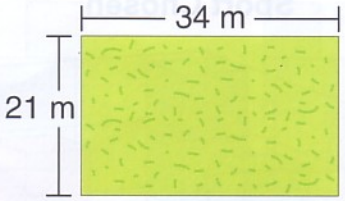
16. Kirra has 7 red jelly frogs and 3 green jelly frogs in a bag.

She takes 1 frog from the bag without looking.

What is the chance that the frog is green?

(A) 1 in 3
(B) 3 in 7
(C) 1 in 10
(D) 3 in 10

17. Gary wants to fence all the sides of his rectangular garden.



One metre of fencing costs $20.

What will be the total cost of Gary's fence?

(A) $20 200
(B) $10 100
(C) $2 200
(D) $1 100

18. Here is a number pattern.

$13 \times 77 = 1001$
$26 \times 77 = 2002$
$39 \times 77 = 3003$
$52 \times 77 = 4004$
. . .
? $\times 77 = 7007$

What is the missing number?

(A) 101
(B) 91
(C) 88
(D) 78

19. Adam and Sally are filling a shopping trolley at the supermarket. Adam puts six mangoes in the empty trolley. Sally then adds four peaches. Adam removes one of the mangoes and adds five apples.

Which of these diagrams best represents the **total number of pieces of fruit** in the shopping trolley?

(A) 

(B) 

(C) 

(D) 

20. Here are some number cards.

Which of these shows the cards in order from smallest to largest number?

(A) 6.1 6.01 0.6 0.06 0.4

(B) 0.06 0.4 0.6 6.1 6.01

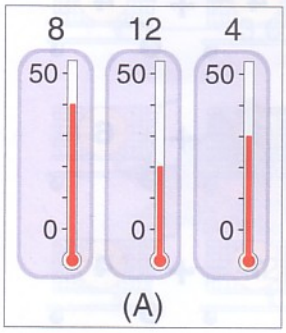
(C) 0.4 0.06 0.6 6.01 6.1

(D) 0.06 0.4 0.6 6.01 6.1

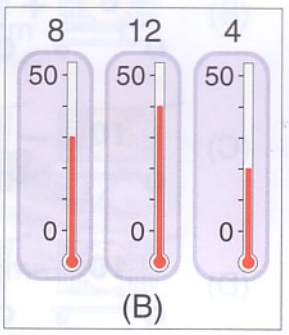
21. Tom measured the temperature at 8 am, 12 noon and 4 pm.

At 12 noon it was hotter than at 8 am.
At 4 pm it was hotter than at 8 am, but cooler than at 12 noon.

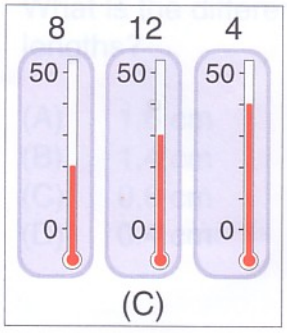
Which diagram shows Tom's three temperature readings?



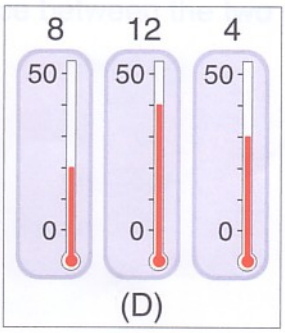
(A)



(B)

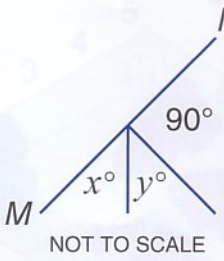


(C)



(D)

22. In the diagram, MN is a straight line.



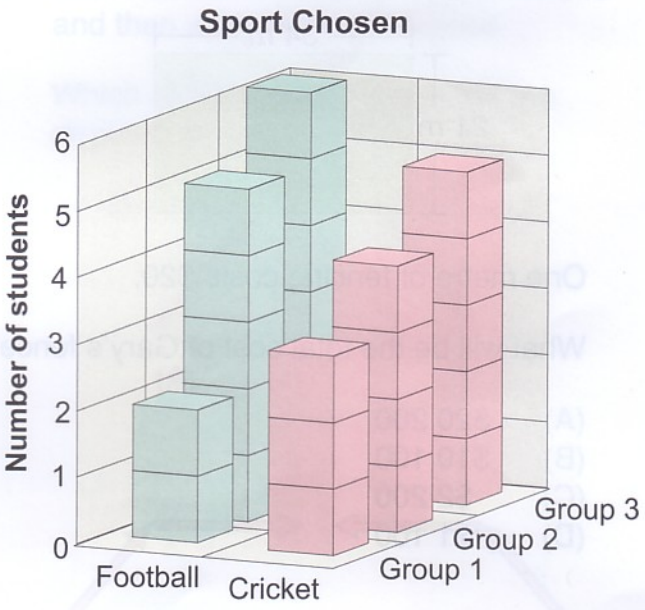
NOT TO SCALE

Which of these number sentences about the values of x and y must be true?

(A) $x < y$
(B) $x + y = 180$
(C) $x + y = 90$
(D) $y > 90$

23. Students in three different groups chose to play either football or cricket.

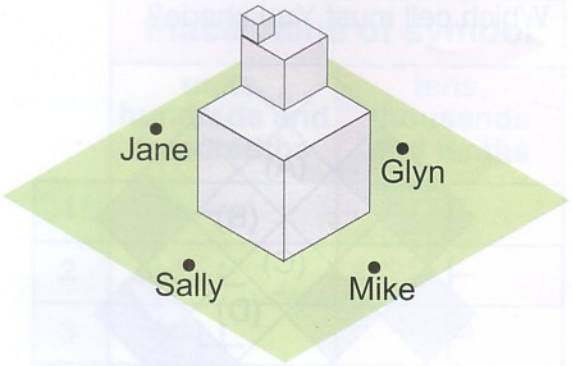
The graph shows the sport they chose.



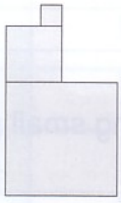
Which of these sets has the greatest number of students?

(A) students in Group 2
(B) students in Group 3
(C) students who chose cricket
(D) students who chose football

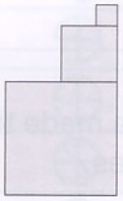
24. Four people took pictures of a sculpture from four different positions, as shown.



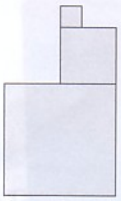
Which picture was taken by Jane?



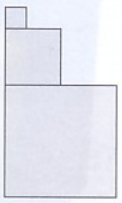
(A)



(B)



(C)



(D)

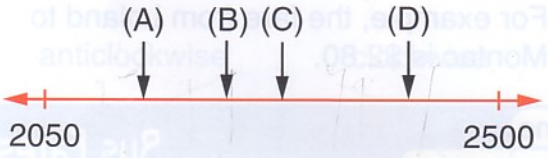
25. Maria had 60 balloons to decorate 8 tables.

She put the same number of balloons on each table and had some balloons left over.

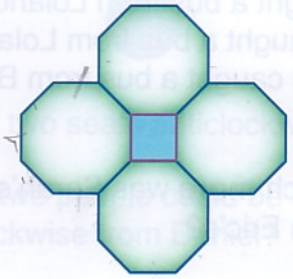
How many balloons were left over?

(A) 2
(B) 4
(C) 6
(D) 8

26. Which arrow points to the position of 2230 on this number line?



27. This shape is made out of five tiles which fit together exactly without gaps or overlaps.



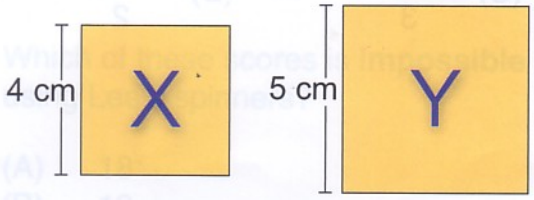
Four tiles are regular octagons and one tile is a square.

The perimeter of the shape is 120 cm.

What is the area, in cm^2, of the square tile?

(A) 6
(B) 15
(C) 24
(D) 36

28. Ari drew square X and square Y, as shown.



How many times greater is the area of square Y than the area of square X?

(A) $1\frac{9}{16}$ (B) $1\frac{1}{2}$

(C) $1\frac{9}{25}$ (D) $1\frac{1}{4}$

29. This table shows the fares between bus stops from Downe to Emor.

For example, the fare from Loland to Montac is $2.80.

Bus Fares

Downe					
$2.50	Loland				
$5.00	$2.80	Montac			
$7.00	$4.50	$2.00	Belhill		
$8.50	$6.00	$4.00	$2.50	Ponds	
$9.90	$7.40	$5.60	$3.50	$1.50	Emor

Eric caught a bus from Loland to Ponds. Sarah caught a bus from Loland to Belhill and then caught a bus from Belhill to Ponds.

How much **more** was Sarah's total bus fare than Eric's?

(A) $1.00
(B) $2.50
(C) $6.00
(D) $7.00

30. What is the next fraction in this pattern?

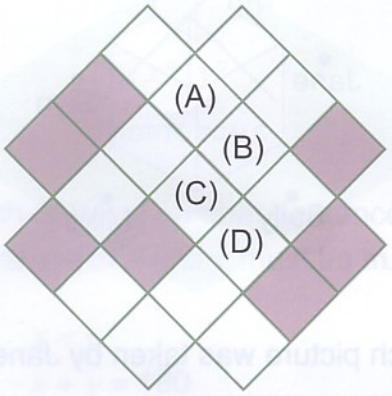
$\frac{1}{24}, \frac{1}{12}, \frac{1}{6}, \frac{1}{3}, ?$

(A) $\frac{2}{6}$ (B) $\frac{1}{2}$

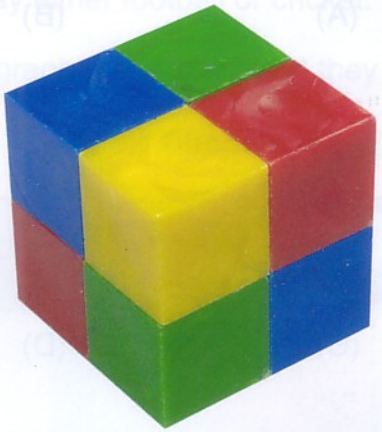
(C) $\frac{2}{3}$ (D) $\frac{3}{2}$

31. Yuri has to shade one more cell in this grid so that it will have rotational symmetry.

Which cell must Yuri shade?



32. Nina made this cube using small plastic cubes.



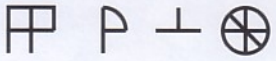
What is the **least** number of small plastic cubes she will need to add to make a larger cube?

(A) 8
(B) 19
(C) 27
(D) 56

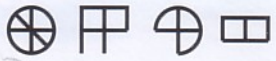
33. The table shows the symbols in a code for writing numbers.

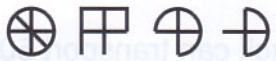
	Place value of symbol	
	units, hundreds and hundredths	tens, thousands and tenths
1		
2		
3		
4		
5		
6		
7		
8		
9		

The number 732.8 would appear as:



Which of these is the number 87.65 in this code?

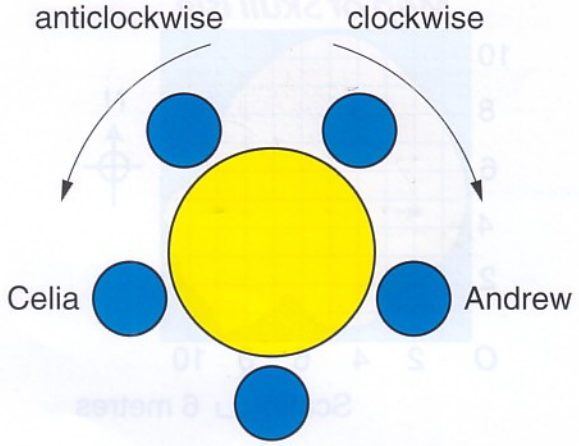
(A) 

(B) 

(C) 

(D) 

34. Andrew, Beth, Celia, Daniel and Elle are sitting at a round table. Celia is two seats clockwise from Andrew, as shown.



Beth is two seats anticlockwise from Elle.

Which two people could be one seat anticlockwise from Daniel?

(A) Celia, Elle (B) Andrew, Beth

(C) Andrew, Elle (D) Beth, Celia

35. Lee has three spinners. After she spins each one, she adds the three numbers to get a score.

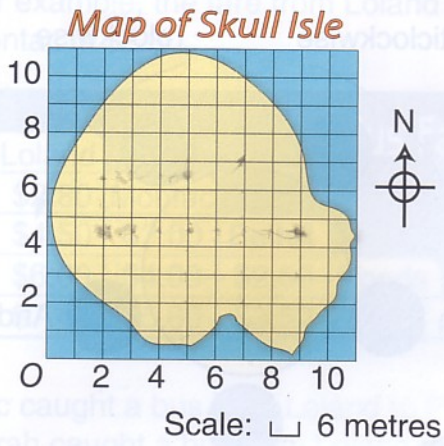
This picture shows three spinners with a score of 14.

Which of these scores is **impossible** using Lee's spinners?

(A) 18
(B) 19
(C) 20
(D) 21

QUESTIONS F1 TO F5 ARE FREE RESPONSE.

F1. This is a pirate's treasure map.



Scale: ⌴ 6 metres

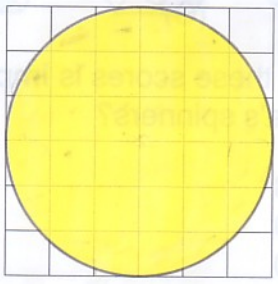
To find the treasure you have to follow these instructions.

Start at position (9, 3).
Turn to face North then walk 9 metres.
Turn left 90° then walk 39 metres.
Turn right 90° then walk 12 metres.
Turn right 90° then walk 15 metres.
Dig for the treasure!

How far, in metres, is the treasure from position (5, 1)?

(Write only the number on your answer sheet.)

F2. This picture shows a circle on a grid made of squares of sides 2 cm.



What is the area of the circle to the nearest whole cm^2?

(Write only the number on your answer sheet.)

F3. What is the missing number?

$$? - \frac{1}{21} \times 8454 = \frac{3}{7}$$

(Write only the number on your answer sheet.)

F4. The number 2374 is made up of four different digits.

How many whole numbers between 2000 and 2100 are made up of four **different** digits?

(Write only the number on your answer sheet.)

F5. Michelle and Sam drive trucks at a mine.

Michelle's truck can transport 50% more dirt than Sam's truck in the same amount of time.

Together they take 10 hours to fill a container.

Working at this rate, how many hours would it take Sam to fill the container by himself?

(Write only the number on your answer sheet.)

END OF PAPER

This page may be used for working.

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www.bushpc.com.au/gallery.html