UNSW
THE UNIVERSITY OF NEW SOUTH WALES

eaa
EDUCATIONAL ASSESSMENT AUSTRALIA

PAPER D

INTERNATIONAL COMPETITIONS AND ASSESSMENTS FOR SCHOOLS

MATHEMATICS 2006

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

You **MUST** record your answers on the **ANSWER SHEET**.

There are **35 MULTIPLE-CHOICE QUESTIONS** (1–35).
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.

There are **5 FREE-RESPONSE QUESTIONS** (36–40).
Write your answers in the boxes provided on the **ANSWER SHEET**.

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

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

PLEASE SEE BACK COVER FOR A LIST OF THE YEAR LEVELS THAT SHOULD SIT THIS PAPER

1. 575 + 324 = ?

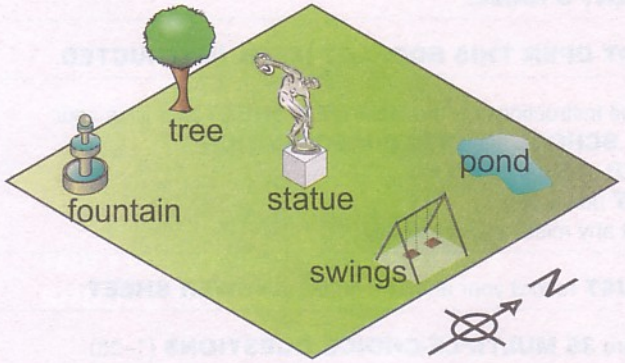
(A) 898
(B) 899
(C) 909
(D) 999

2. A picture is missing from this pattern.

Which picture is missing?

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

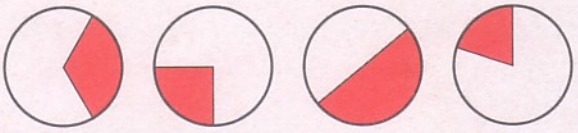
3. This map shows a statue in the middle of a park.



What is west of the statue?

(A) fountain
(B) swings
(C) pond
(D) tree

4. Which circle has one-third shaded?

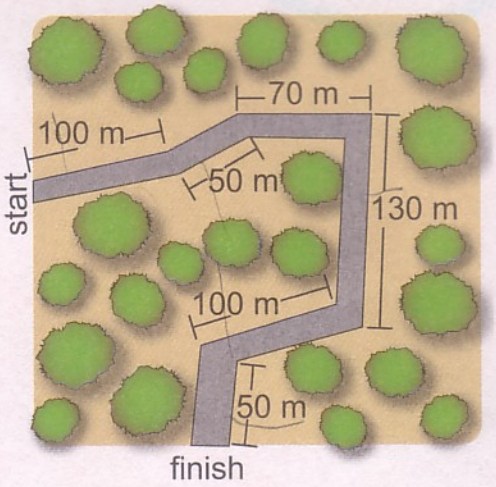


(A) (B) (C) (D)

5. 42 ÷ 6 = ?

(A) 7
(B) 8
(C) 36
(D) 48

6. The map shows distances on a path through a forest.



Sally walked the whole path from start to finish.

How far did Sally walk?

(A) 300 m
(B) 400 m
(C) 500 m
(D) 600 m

7. Alex has some cats like this one.

Altogether his cats have a total of 28 legs.

How many cats does Alex have?

(A) 112 (B) 32

(C) 14 (D) 7

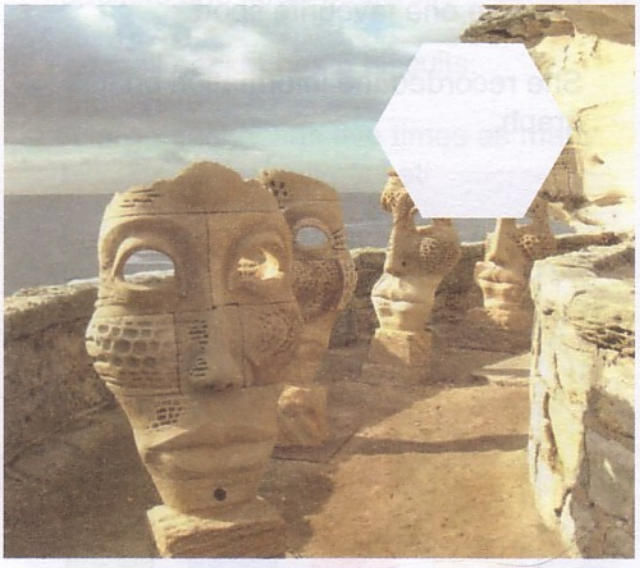
8. Lien bought one bottle and one can of drink.

375 mL 1 L

How many millilitres of drink did she buy?

(A) 376 mL
(B) 385 mL
(C) 475 mL
(D) 1375 mL

9. A piece has been cut from this picture.



Which piece will complete the picture?

(A)

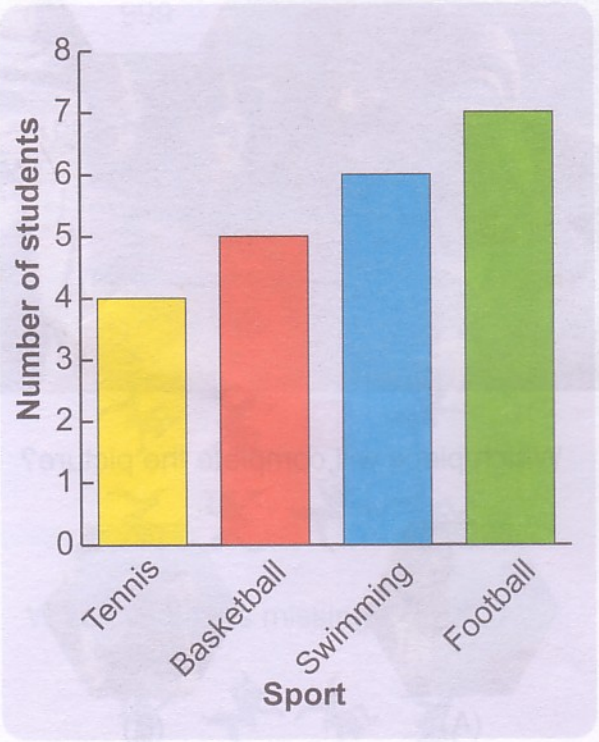
(B)

(C)

(D)

10. Ms Moody asked each student in her class to name one favourite sport.

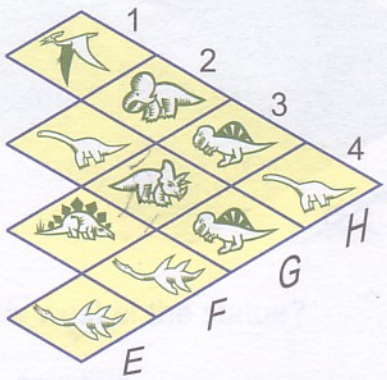
She recorded the information on this graph.



How many students were in Ms Moody's class?

(A) 7 (B) 15
(C) 18 (D) 22

11. On this grid the picture  is in box H2.



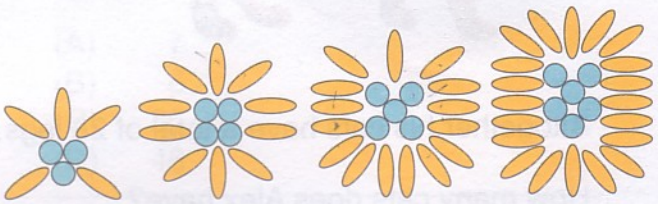
Which picture is in box G3?

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

12. 900 – 358 = ?

(A) 542
(B) 552
(C) 642
(D) 658

13. Jack made a pattern of shapes out of ovals and circles .



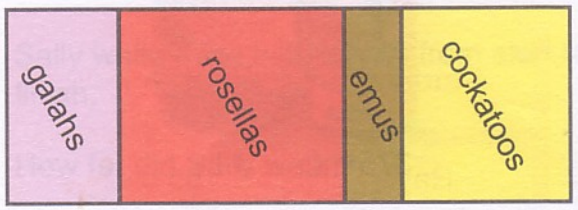
Jack continued the pattern until he had a shape which used 10 circles.

How many ovals should that shape have?

(A) 25
(B) 35
(C) 40
(D) 50

14. Bill went on a walk in an Australian national park.

He drew a graph to show the proportion of different birds he saw on his walk.



Approximately what fraction of the birds were rosellas?

(A) $\frac{1}{4}$ (B) $\frac{2}{5}$
(C) $\frac{2}{4}$ (D) $\frac{3}{5}$

15. Mei-Ling painted a symmetrical picture of a lizard.

This is one half of Mei-Ling's picture.

Which of these is the other half of Mei-Ling's picture?

(A)

(B)

(C)

(D)

16. Students measured the height of four windows.

This table shows their results.

Student	Window height
Ray	55 cm
Toby	0.61 m
Vera	1.3 m
Evelyn	1025 mm

Who measured the highest window?

(A) Ray
(B) Toby
(C) Vera
(D) Evelyn

17. Rainbow biscuits can be bought in small packets and large packets.

A small packet has 5 biscuits.

A large packet has five times as many biscuits as a small packet.

Les buys 2 large packets and 4 small packets.

How many biscuits does he buy altogether?

(A) 30
(B) 70
(C) 110
(D) 180

18. $33 \times 28 =$?

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

19. ? – ? ÷ 2 = 5

Which of these makes the number sentence true?

(A) ? = 6 ? = 2
(B) ? = 14 ? = 4
(C) ? = 18 ? = 8
(D) ? = 20 ? = 10

20. Douglas, Ming and Omar each has a bag of marbles.

Ming has 3 less marbles than Douglas.

Omar has 12 less marbles than Douglas.

Which statement is true?

(A) Ming has 15 more marbles than Omar.
(B) Omar has 15 more marbles than Ming.
(C) Omar has 9 more marbles than Ming.
(D) Ming has 9 more marbles than Omar.

21. Mel recorded the results of 80 spins of a spinner.

29 19 21 11

Which of these spinners is most likely to be the one Mel used?

(A)

(B)

(C)

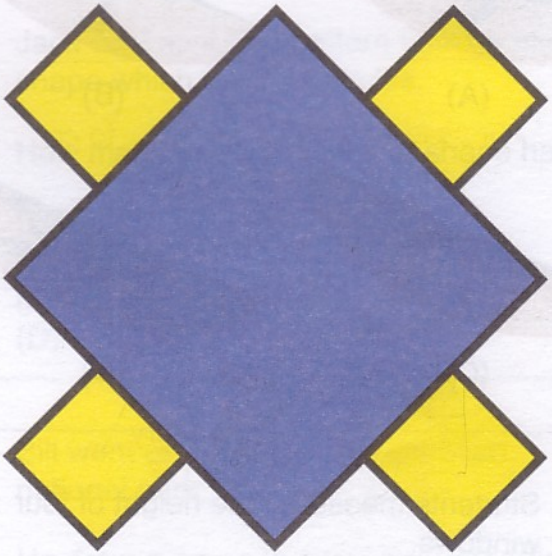
(D)

22. In 2005, there were 64 000 spectators at the football grand final. In 2006, a 25% increase in the number of spectators is expected.

About how many spectators are expected in 2006?

(A) 70 000
(B) 80 000
(C) 90 000
(D) 100 000

23. This shape has four small squares and one large square.

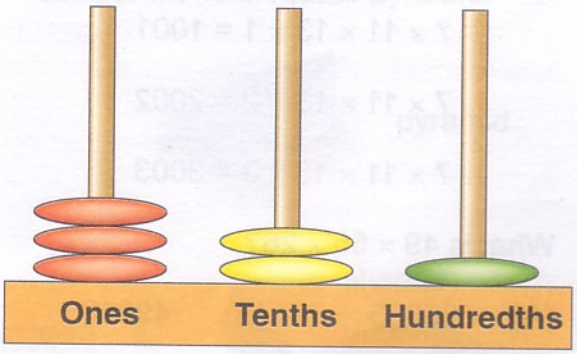


The area of each small square is 4 cm^2.

What is the area of the **whole** shape?

(A) 13 cm^2
(B) 36 cm^2
(C) 52 cm^2
(D) 160 cm^2

24. This is a bead counter.

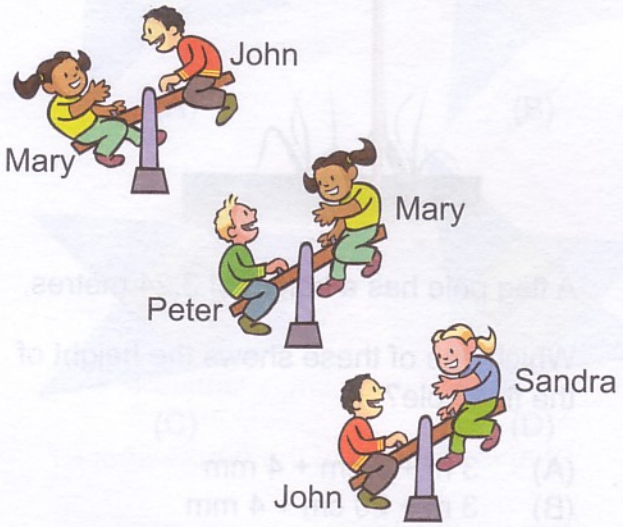


Which number is shown on the bead counter?

(A) 1.23 (B) 3.21

(C) 123 (D) 321

25. Four children used a see-saw to compare how heavy they were.

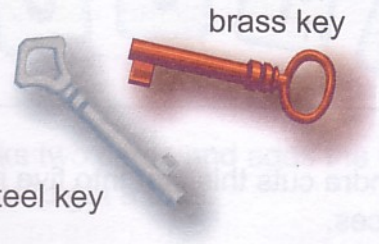


What is the order of the children from heaviest to lightest?

(A) Peter, Mary, John, Sandra
(B) Peter, John, Mary, Sandra
(C) Mary, Peter, John, Sandra
(D) Mary, John, Peter, Sandra

26. Mabel has a bag which contains 12 keys.

There are two types of keys in the bag, steel and brass.

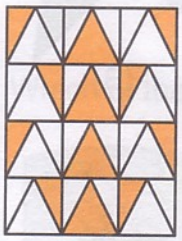


Mabel has a 1 in 3 chance of drawing out a brass key.

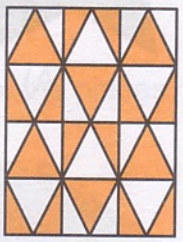
How many steel keys are there in the bag?

(A) 3
(B) 4
(C) 8
(D) 9

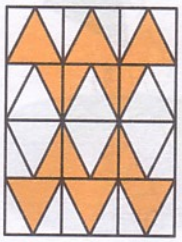
27. Which design has the **smallest** area shaded orange?



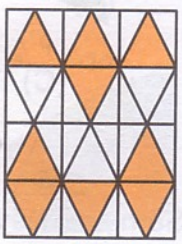
(A)



(B)



(C)



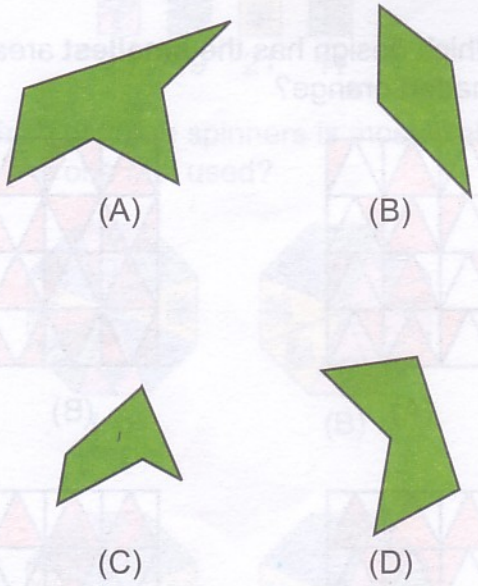
(D)

28. How many multiples of 19 are there between 200 and 400?

(A) 9
(B) 10
(C) 11
(D) 12

29. Sandra cuts this star into five identical pieces.

Which of these is the shape of one piece?



30. Sam and Kevin are bricklayers.

Sam lays 150 bricks in 60 minutes.
Kevin lays 20 bricks in 10 minutes.

Working together, how many minutes will it take Sam and Kevin to lay 180 bricks?

(A) 25 (B) 40

(C) 70 (D) 100

31. Look at this pattern of numbers.

$7 \times 11 \times 13 \times 1 = 1001$

$7 \times 11 \times 13 \times 2 = 2002$

$7 \times 11 \times 13 \times 3 = 3003$

What is $49 \times 55 \times 26$?

(A) 35035 (B) 49049

(C) 70007 (D) 70070

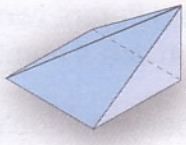
32.

A flag pole has a height of 3.24 metres.

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

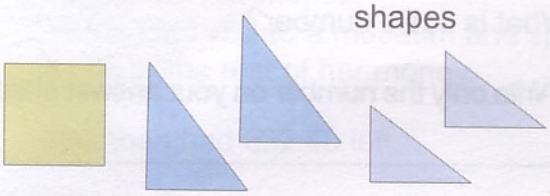
(A) 3 m + 2 cm + 4 mm
(B) 3 m + 20 cm + 4 mm
(C) 3 m + 20 cm + 40 mm
(D) 3 m + 200 cm + 40 mm

33. This diagram shows the shapes that were used to make a square pyramid.

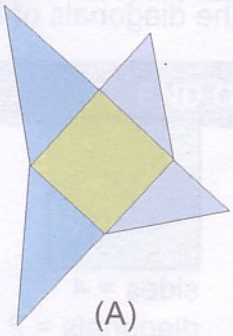


pyramid

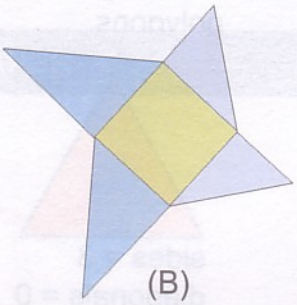
shapes



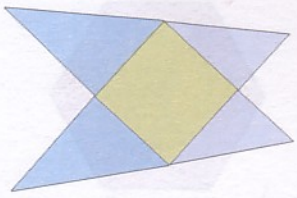
Which of these could be the net of the pyramid?



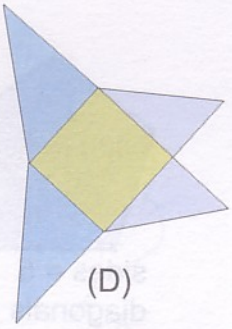
(A)



(B)

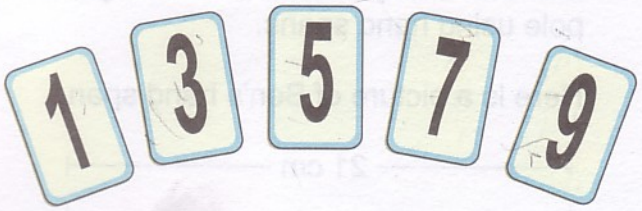


(C)



(D)

34. Amir has five cards with numbers on them.



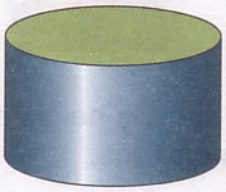
He picks two cards and adds the numbers on them to get a total.

How many **different** totals can Amir make?

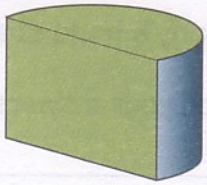
(A) 5 (B) 7

(C) 10 (D) 25

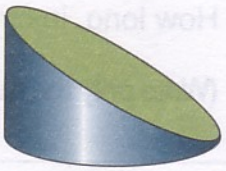
35. This cylinder was cut into two identical pieces.



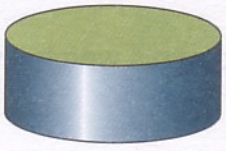
Which of these is one of the pieces?



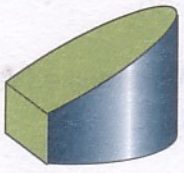
(A)



(B)



(C)



(D)

QUESTIONS 36 TO 40 ARE FREE RESPONSE.

36. Ben and Jenny measured the height of a pole using hand spans.

Here is a picture of Ben's hand span.

Ben found that the height of the pole is 8 of his hand spans.

The height of the pole is 12 of Jenny's hand spans.

How long, in cm, is Jenny's hand span?

(Write only the number on your answer sheet.)

37. Ollie is waiting for a bus that will arrive at 8:30.

When Ollie first looked at his watch it was 8:12.

When he looked at his watch a short while later, the minute hand had turned 72°.

How many more **seconds** does Ollie have to wait for the bus?

(Write only the number on your answer sheet.)

38. Joe wrote a two-digit number. Its tens digit is 3 times its units digit.

Gemma wrote a different two-digit number using the digits in Joe's number.

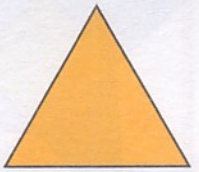
The difference between Joe's number and Gemma's number is 36.

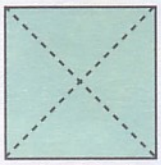
What is Joe's number?

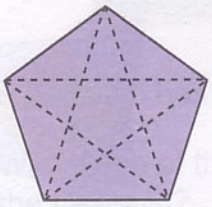
(Write only the number on your answer sheet.)

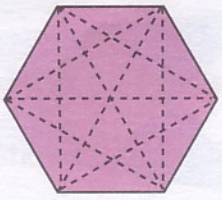
39. A regular polygon is a shape with straight sides all the same length.

The diagram shows the diagonals of four polygons.


sides = 3
diagonals = 0


sides = 4
diagonals = 2


sides = 5
diagonals = 5


sides = 6
diagonals = 9

How many diagonals would a regular polygon with 15 sides have?

(Write only the number on your answer sheet.)

40. Paula is visiting Germany. In Germany the currency used is the Euro (€).

Paula took some money with her on a day trip.

She spent a third of her money on a meal. She then spent a quarter of what was left on gifts for her friends.
Paula then visited a museum and spent a fifth of the rest of her money.

She then had €32.40 left.

How many Euros (€) did Paula take on her day trip?

(Write only the number on your answer sheet.)

END OF PAPER

THE FOLLOWING YEAR LEVELS SHOULD SIT THIS PAPER:

AUSTRALIA: Year 6
BRUNEI: Primary 6
INDONESIA: Year 7
MALAYSIA: Standard 6
NEW ZEALAND: Year 7
PACIFIC: Year 6
SINGAPORE: Primary 5
SOUTH AFRICA: Grade 6