UNSW THE UNIVERSITY OF NEW SOUTH WALES SYDNEY • AUSTRALIA

EDUCATIONAL ASSESSMENT AUSTRALIA

PAPER C

ICAS

INTERNATIONAL COMPETITIONS AND ASSESSMENTS FOR SCHOOLS

MATHEMATICS

2008

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED.

40 QUESTIONS
TIME ALLOWED: 45 MINUTES

STUDENT'S NAME:

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**.

Mark only **ONE** answer for each question.
Your score will be the number of correct answers.
Marks are **NOT** deducted for incorrect answers.

There are **40 MULTIPLE-CHOICE QUESTIONS** (1–40).
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.

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

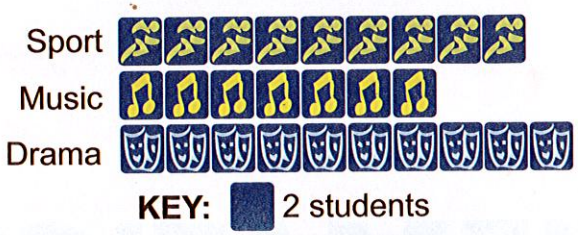
PLEASE SEE BACK COVER FOR A LIST OF THE YEAR LEVELS THAT SHOULD SIT THIS PAPER

1. What is the missing number?

$2 \times \boxed{?} + 4 = 10$

(A) 3
(B) 5
(C) 6
(D) 8

2. The graph shows how many students picked Sport, Music or Drama as an activity.

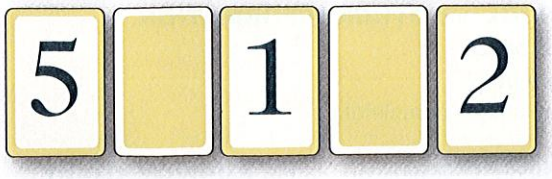


How many students picked Music?

(A) 7
(B) 9
(C) 10
(D) 14

3. Mike has these five cards.

He turns two of the cards over.



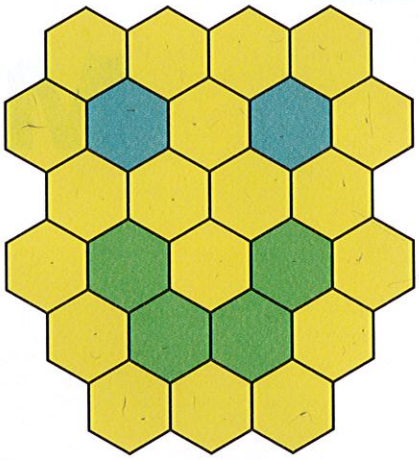
What is the sum of the two cards Mike turned over?

(A) 3
(B) 4
(C) 7
(D) 8

4. Which runner is wearing the biggest number?

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

5. Ian made this design out of tiles.



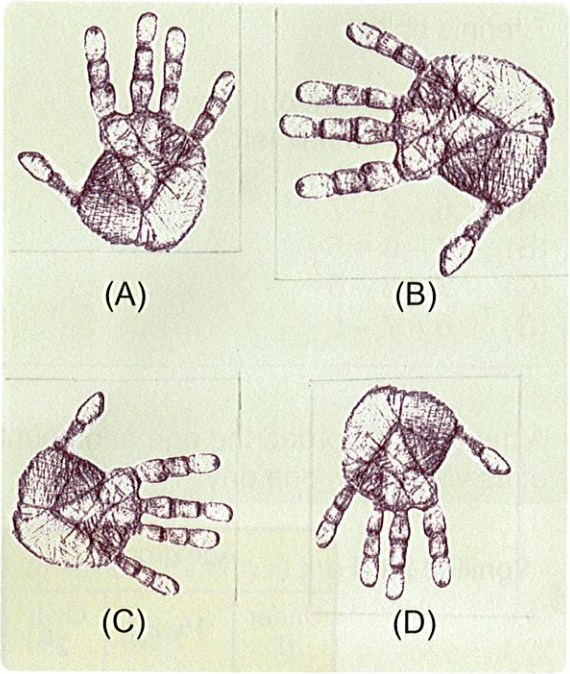
Each of the tiles has an area of 1 cm^2.

 = 1 cm^2

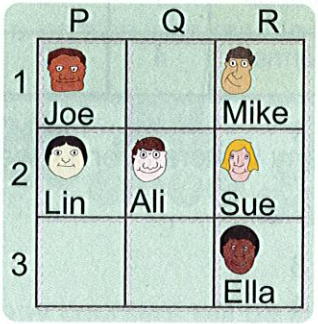
What is the area of the design?

(A) 18 cm^2
(B) 24 cm^2
(C) 25 cm^2
(D) 30 cm^2

6. Which handprint covers the biggest area?



7. Joe is in box P1.

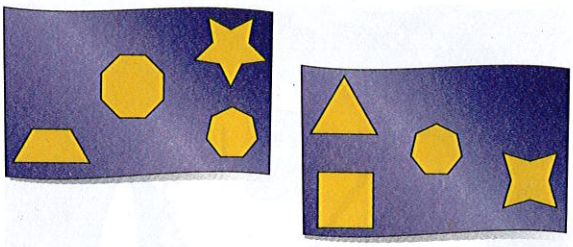


Who is in box R2?

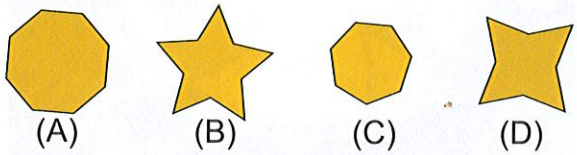
(A) Ali (B) Ella

(C) Mike (D) Sue

8. The picture shows two flags.



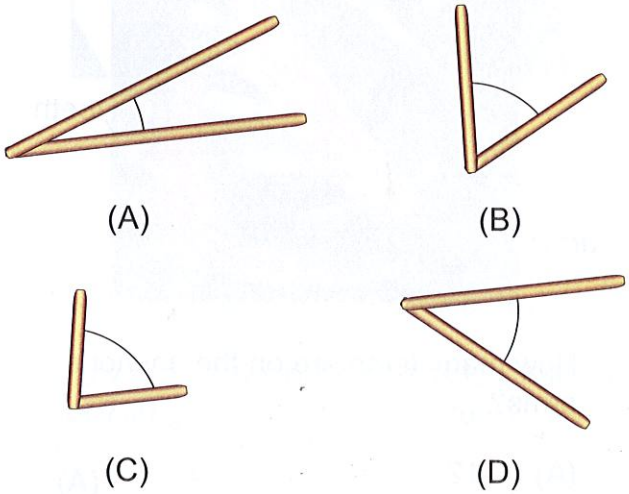
Which shape is on both flags?



9. $6 \times 9 =$?

(A) 15
(B) 45
(C) 48
(D) 54

10. Which of these shows the largest angle?



11. What time is shown on this clock?

(A) 2:54
(B) 3:11
(C) 3:56
(D) 11:15

12. This special anchor for large ships has 5 arms. On each arm are 7 teeth.

How many teeth are on the anchor's arms?

(A) 12
(B) 21
(C) 30
(D) 35

13. Nick bought 6 packets of tennis balls. Each packet had 5 balls in it. Nick lost 7 tennis balls.

How can he work out how many tennis balls he has left?

(A) $6 \times 5 - 7$
(B) $7 - 6 \times 5$
(C) $7 \times 5 - 6$
(D) $6 \times 7 - 5$

14. A museum recorded the age and country of its visitors on one day.

		Age group		
		Under 15	15–25	Over 25
Country	UK	2	5	1
	USA	3	4	3
	Japan	1	3	4
	Germany	4	2	2

How many visitors over 14 were from the USA?

(A) 3
(B) 4
(C) 7
(D) 10

15. Eight apples fit into a small box. Twice as many fit into a large box.

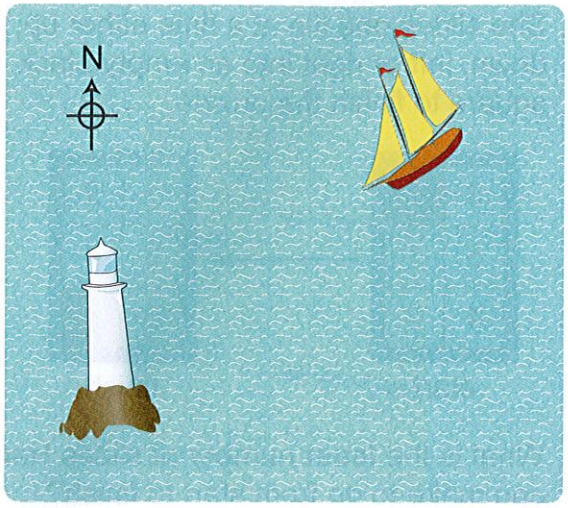
Reena has 3 of the small boxes and 2 of the large boxes.

What is the total number of apples that can fit into Reena's boxes?

(A) 64 (B) 56

(C) 40 (D) 28

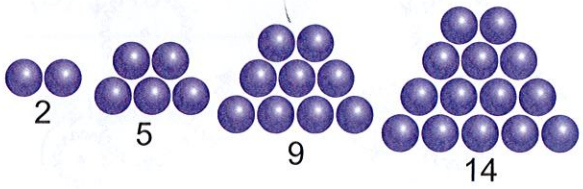
16. The boat is sailing to the lighthouse.



In what direction is the boat sailing?

(A) east
(B) south
(C) north-east
(D) south-west

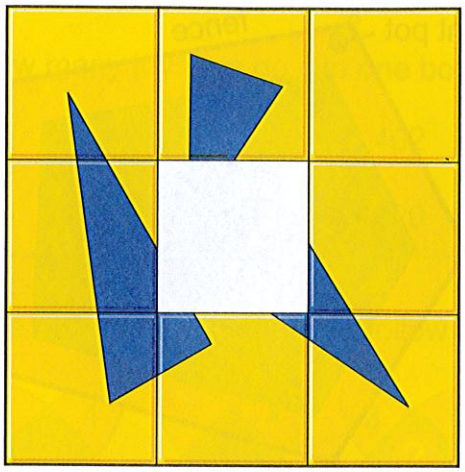
17. Here is a pattern with counters.



How many counters will be in the next shape of the pattern?

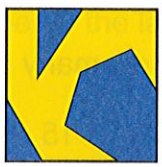
(A) 19
(B) 20
(C) 21
(D) 22

18. When the last piece is put into this puzzle it shows 3 triangles.

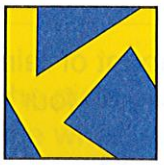


Which piece is missing from the puzzle?

(A)



(B)



(C)

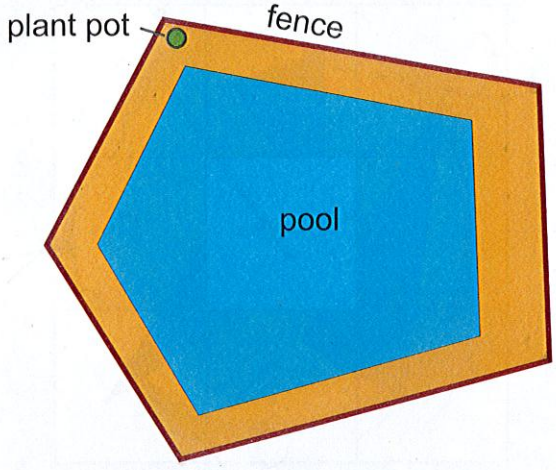
(D)

19. Charlie made some chocolate chip cookies. Charlie used 20 chocolate chips for every 100 grams of cookie mixture.

How many chocolate chips did Charlie use for 760 grams of cookie mixture?

(A) 5
(B) 38
(C) 120
(D) 152

20. The picture shows the area around Wendy's swimming pool.



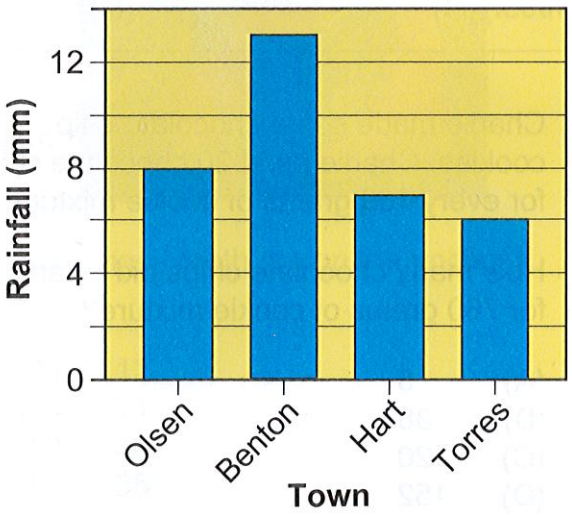
She plans to have 5 pots along each side of the pool including a pot at every corner.

How many pots would Wendy need?

(A) 15 (B) 20

(C) 25 (D) 30

21. This graph shows the amount of rainfall, to the nearest millimetre (mm), in four towns on a particular day.



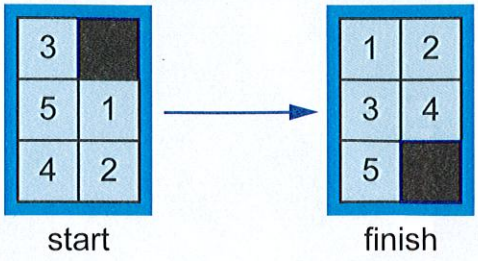
What is the difference, in millimetres, between the highest and lowest amounts of rainfall shown on this graph?

(A) 6 (B) 7

(C) 8 (D) 9

22. Hannah has a sliding tile puzzle.

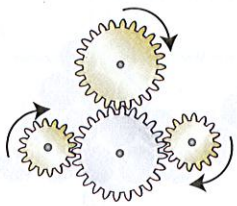
She slides one tile at a time either up, down, left or right into an empty black square to finish the puzzle.



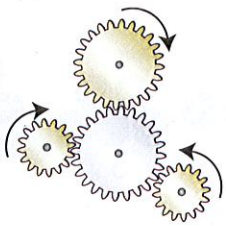
What is the **least** number of slides Hannah can make to go from start to finish?

(A) 5
(B) 7
(C) 8
(D) 10

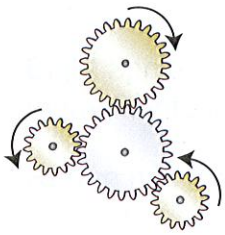
23. Which set of gears can move as shown by the arrows?



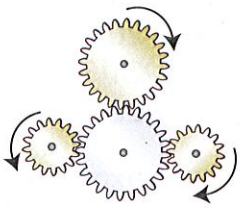
(A)



(B)

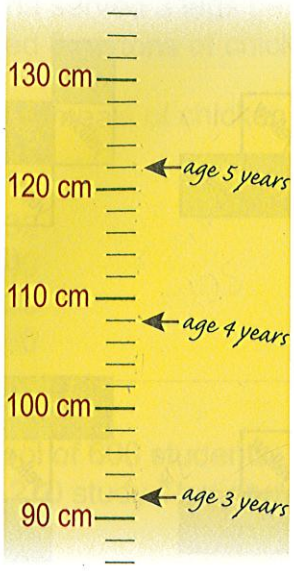


(C)



(D)

24. The chart shows Jack's height on his birthdays for three years.

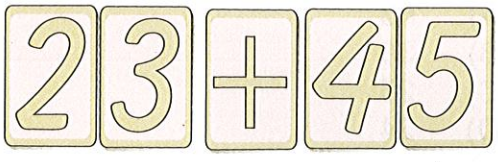


How many centimetres did Jack gain in height during the **fourth** year of his life?

(A) 13
(B) 14
(C) 16
(D) 18

25. Jim has these number cards.

He can arrange them to make a sum. This sum makes a total of 68.



What is the highest sum Jim can make with his cards?

(A) 86
(B) 95
(C) 437
(D) 545

26. A machine packs 4422 toy cars into 11 boxes. It puts an equal number of cars into each box.

How many toy cars go into one box?

(A) 42 (B) 402

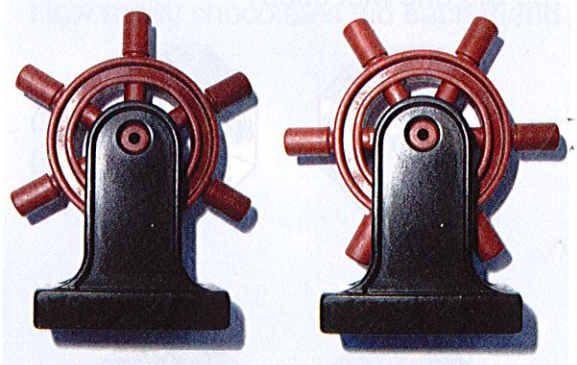
(C) 2211 (D) 4020

27. The numbers in the shapes follow a rule.

What is the missing number in the last shape?

(A) 9
(B) 15
(C) 24
(D) 45

28. The pictures show the wheel of a toy ship. The wheel was turned from the position in picture 1 to that in picture 2.



picture 1 picture 2

How many degrees was the wheel turned?

(A) 15° (B) 30°

(C) 45° (D) 60°

29. Ashlee sleeps from 10 pm until 6 am every night of the week.

How many minutes does Ashlee sleep in a week?

(A) 3360 (B) 1680

(C) 480 (D) 56

30. Jackie can make 2 pies in 3 minutes. Lenny can make 3 pies in 2 minutes.

How many pies can they make together in an hour?

(A) 50
(B) 100
(C) 130
(D) 150

31. 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?

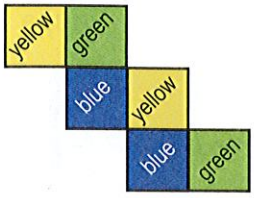
(A)

(B)

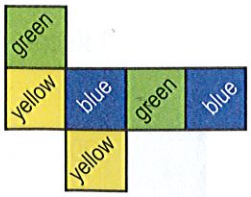
(C)

(D)

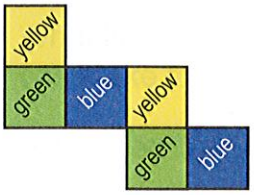
32. Which net would make a cube where no two faces of the same colour meet to form an edge?



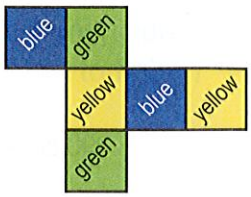
(A)



(B)

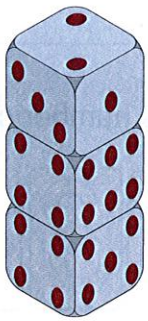


(C)



(D)

33. The picture shows a stack of three dice. Each dice has the numbers 1 to 6 shown in dots on the faces.



What is the sum of all of the numbers **NOT** shown in the picture?

(A) 63
(B) 38
(C) 25
(D) 24

34. In a carton there are 12 packets of chicken legs. Each packet has 10 legs in it.

A cafeteria served 3 legs per meal. They used 8 cartons of chicken legs.

How many meals of chicken legs were served?

(A) 32
(B) 40
(C) 320
(D) 360

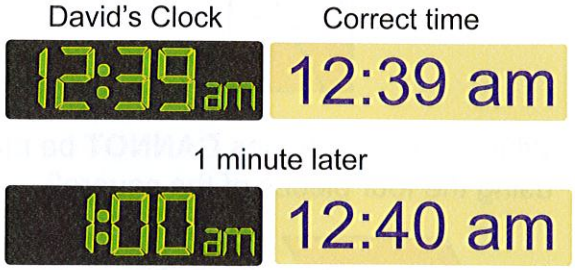
35. In a school of 600 students, 320 study Korean, 270 study Thai and 110 study German.

There are 150 students who study only two languages: 60 students study Korean and Thai, 50 students study Thai and German, and 40 students study German and Korean.

At most how many students study all three languages?

(A) 20
(B) 50
(C) 100
(D) 110

36. David's clock is not working properly. The hour changes every 40 minutes instead of every 60 minutes.



David's clock was correct at 12:00 am. It now shows this time:

What is the correct time?

(A) 2:15 am
(B) 2:55 am
(C) 3:45 am
(D) 4:35 am

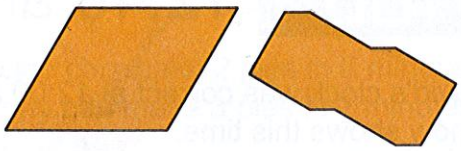
37. A group of friends shared 108 chocolates equally. The number of chocolates each friend got was three more than the number of friends.

How many chocolates did each friend get?

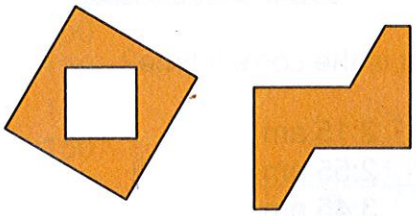
(A) 6
(B) 9
(C) 12
(D) 18

38. A square can be cut into four pieces that are the same shape.

Which of these shapes **CANNOT** be made using the four pieces of the square?



(A) (B)



(C) (D)

39. Ian has some jars of ginger. The jars come in three sizes.

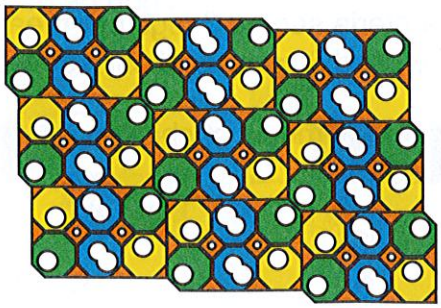
175 g 200 g 225 g

Ian has at least one of each size of jar and all his jars are full.
Altogether he has 1.15 kilograms of ginger in the jars.

How many jars does he have?

(A) 4
(B) 5
(C) 6
(D) 7

40. This pattern was made by laying out copies of a smaller pattern.



What is the smaller pattern?

(A)

(B)

(C)

(D)

Mathematics

Question Number	Paper C
1	A
2	D
3	C
4	D
5	C
6	B
7	D
8	C
9	D
10	C
11	A
12	D
13	A
14	C
15	B
16	D
17	B
18	A
19	D
20	B
21	B
22	C
23	A
24	C
25	D
26	B
27	D
28	B
29	A
30	C
31	C
32	D
33	B
34	C
35	A
36	B
37	C
38	A
39	C
40	B