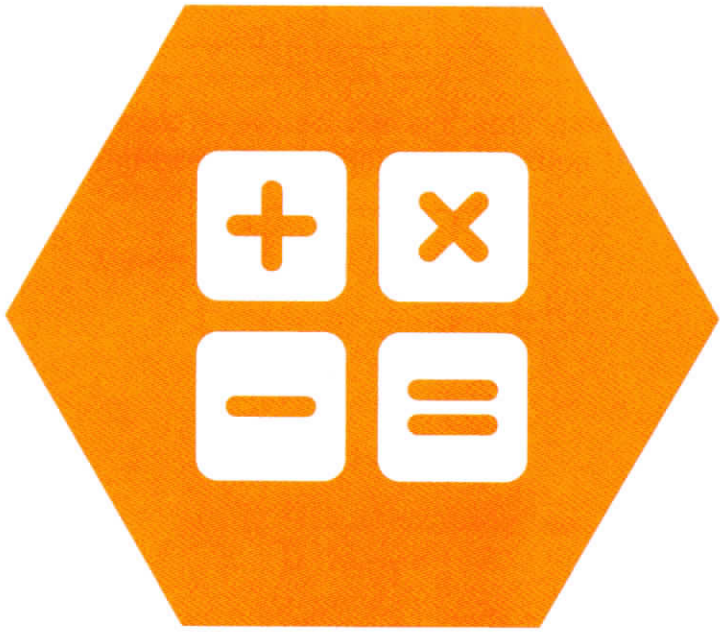
UNSW Global
AUSTRALIA

PAPER C



2016 ICAS

International Competitions and Assessments for Schools

MATHEMATICS

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.

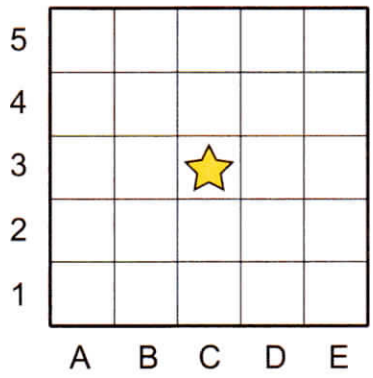
Educational Assessment Australia
eaa.unsw.edu.au

1. Anna waited for 15 minutes at the bus stop. She caught the school bus at 8:10 am.

What time did Anna arrive at the bus stop?

(A) 7:35 am (B) 7:45 am
(C) 7:55 am (D) 8:25 am

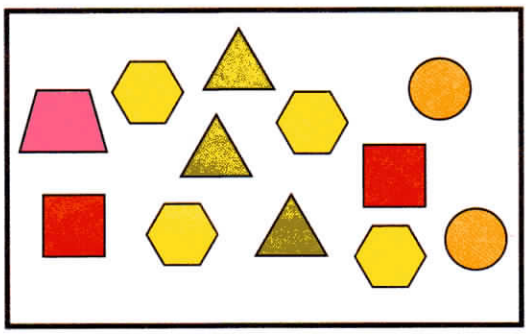
2. Andy drew this star 2 squares below and 1 square to the right of its correct position.



Where should Andy have drawn the star?

(A) B1 (B) D1
(C) D5 (D) B5

3. Tom has 12 plastic shapes. He closes his eyes and picks up a shape.

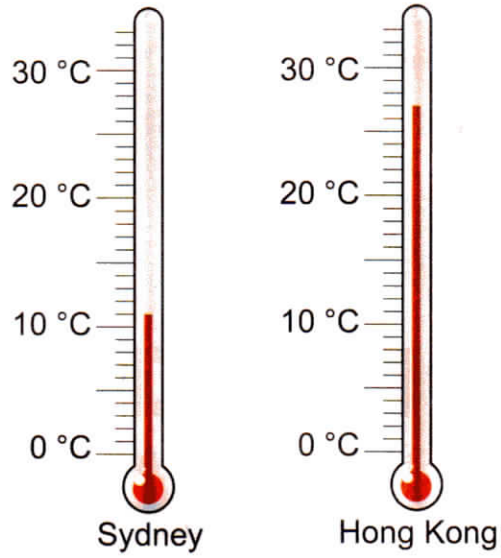


Which shape has twice the chance of being picked up as the square?

(A)  (B) 

(C)  (D) 

4. These thermometers show the temperatures in two cities one morning.

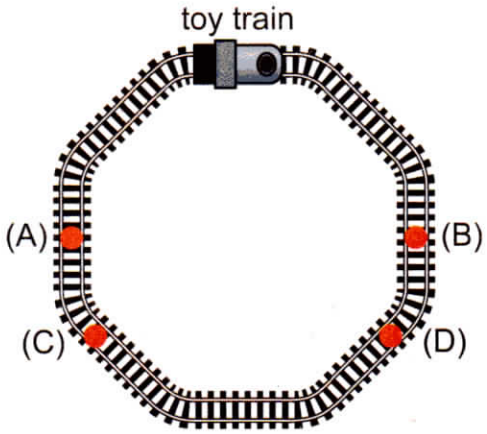


How much warmer was it in Hong Kong than in Sydney?

(A) 13 °C
(B) 15 °C
(C) 16 °C
(D) 18 °C

5. The picture shows a toy train on a track. The train starts from the position shown and goes one-third of the way around the track in a clockwise direction. It then stops.

Which point is closest to where the train stops?



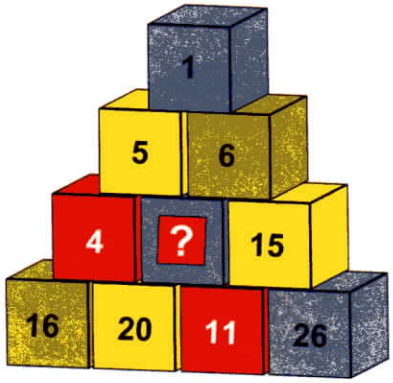
6. Which of these has the same value as 98 – 35?

(A) 108 – 35
(B) 108 – 25
(C) 100 – 37
(D) 100 – 33

7. Which of these orders the decimals from smallest to largest?

(A) 0.31 0.05 0.4
(B) 0.05 0.31 0.4
(C) 0.31 0.4 0.05
(D) 0.4 0.05 0.31

8. This is a picture of Jim's tower.



The number on each block is equal to the difference between the numbers on the two blocks it rests on.

What number must ? be?

(A) 1
(B) 9
(C) 11
(D) 19

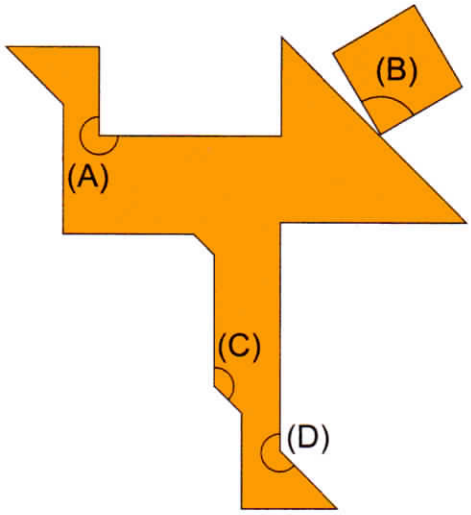
9. A plane drops 10 food parcels at equal intervals over a distance of 3 kilometres.

About how many metres is it between one parcel and the next?

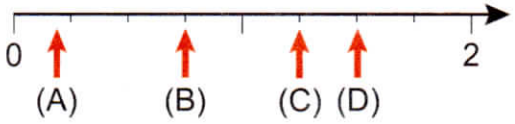
(A) 3
(B) 30
(C) 300
(D) 3000

10. Sven made a pattern with some cardboard shapes.

Which angle is the largest?



11. Which arrow is pointing to $\frac{3}{4}$ on the number line?

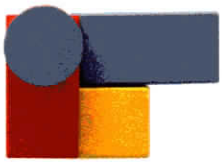


12. Sally made this castle using 4 solids.

Which of these is a view of Sally's castle from above?

(A)

(B)



(C)

(D)

13. Janine bought three pages of stickers with 30 stickers on each page.

Paula bought five of the same pages of stickers.

How many stickers did they buy altogether?

(A) 38
(B) 95
(C) 240
(D) 450

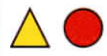
14. Lulu sold some books last week.

The number of books sold on Saturday was more than Friday's sales but less than Wednesday's sales.

Which of these could be the number of books that Lulu sold on Saturday?

(A) 17
(B) 14
(C) 11
(D) 7

15. In Anish's code, the symbols are added together to give values. The table shows the value of Anish's sums using his symbols.

Anish's symbols	Value
	2
	6
	30
	?

What value must ? be?

(A) 38
(B) 41
(C) 42
(D) 48

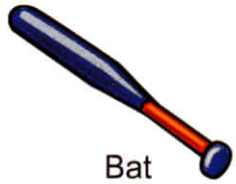
16. Pete wants to post presents to his son for his birthday.

He can choose from these items.

Baseball
150 grams

Helmet
1450 grams

Glove
390 grams

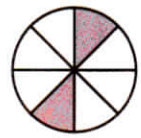


Bat
450 grams

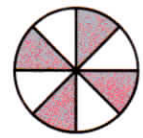
Which items can Pete post so that the total mass is as close as possible to 2000 grams?

(A) all 4 items
(B) the helmet and the bat
(C) the baseball, bat and glove
(D) the helmet, baseball and glove

17. Anna and Mia each shaded parts of two circles of the same size..



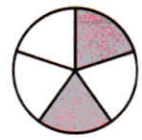
Anna's circle



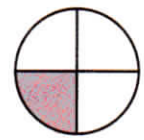
Mia's circle

Edward also shaded parts of a circle of the same size. He shaded a greater area than Anna did, but a smaller area than Mia did.

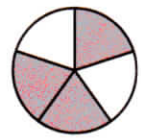
Which of these could be Edward's circle?



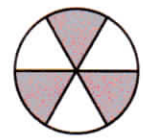
(A)



(B)



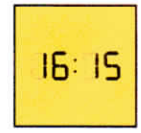
(C)



(D)

18. All the times shown on these clocks were on the same day.

L



M

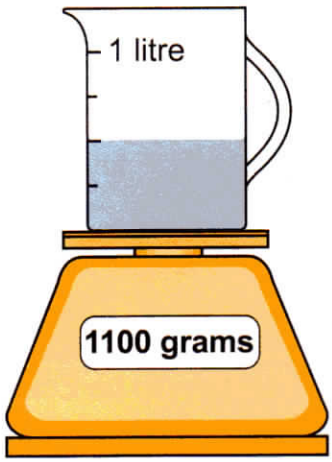
N

O

What is the order of the clocks from the earliest time to the latest time?

(A) L, O, M, N
(B) L, N, O, M
(C) L, O, N, M
(D) L, N, M, O

19. Ying measured the mass of a jug containing some water.



One litre of water has a mass of 1 kilogram.

What was the mass of the jug?

(A) 100 grams
(B) 500 grams
(C) 550 grams
(D) 600 grams

20. Mr Martins opened a stall as he had 800 games to sell.

The first day he sold 120 games.

Each day after that he sold half as many games as he sold the day before.

How many games did Mr Martins have left at the end of the third day?

(A) 440
(B) 590
(C) 620
(D) 680

21. This is a playing card.

This image shows the top half of the card.

What must be done to this image in order to create the bottom half of the card?

(A) Flip it over the horizontal line.
(B) Flip it over the vertical line.
(C) Rotate it a half turn.
(D) Rotate it a quarter turn.

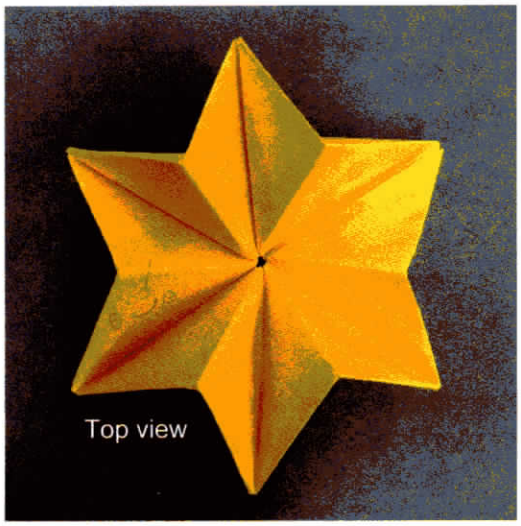
22. In Mrs Li's class today each student did either reading or writing.

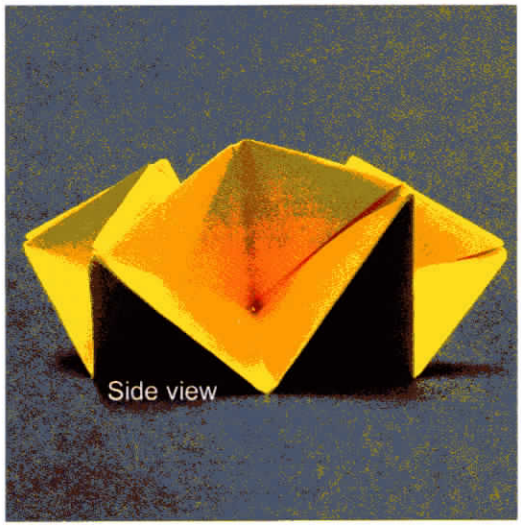
- There were groups of 3 for reading.
- There were groups of 5 for writing.
- There were 7 groups altogether.

How many students could be in the class?

(A) 21
(B) 24
(C) 26
(D) 29

23. This is a model of a 3D object made by folding paper.





How many faces does the 3D object have?

(A) 12
(B) 24
(C) 48
(D) 60

24. Ms Clark asked 36 students to choose between ball games and computer games.

She started to put her results in a table.

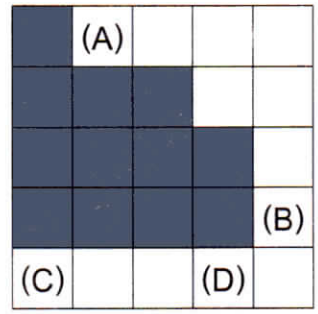
	Preferred game		
	computer	ball	
Boys	9		
Girls		?	21
		19	

How many girls preferred ball games?

(A) 8
(B) 10
(C) 11
(D) 13

25. Alana needs to colour in one more square to make a shape with one line of symmetry.

Which square does she need to colour in?



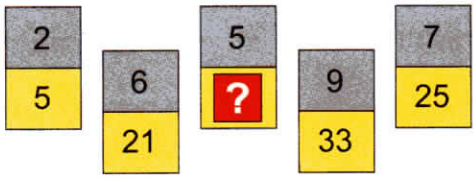
26. At the circus, 2 sticks of fairy floss cost the same as 3 lollipops.

If Sue buys one stick of fairy floss, she will have \$1.50 left over. If Sue buys one lollipop, she will have \$2 left over.

How much money does Sue have?

(A) \$2.50
(B) \$3.00
(C) \$3.50
(D) \$5.00

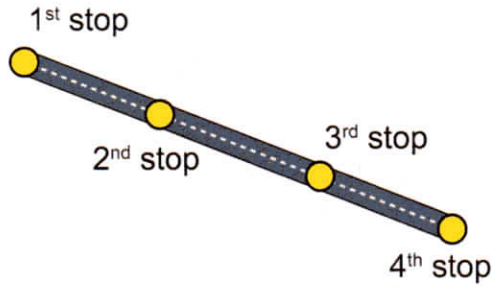
27. A rule is applied to the top number in each rectangle to give the bottom number.



What number must ? be?

(A) 17
(B) 16
(C) 15
(D) 11

28. Lin drew a rough map to help her find the distances between four bus stops along a country road.



The distance between the 1st stop and the 3rd stop is 22 kilometres.

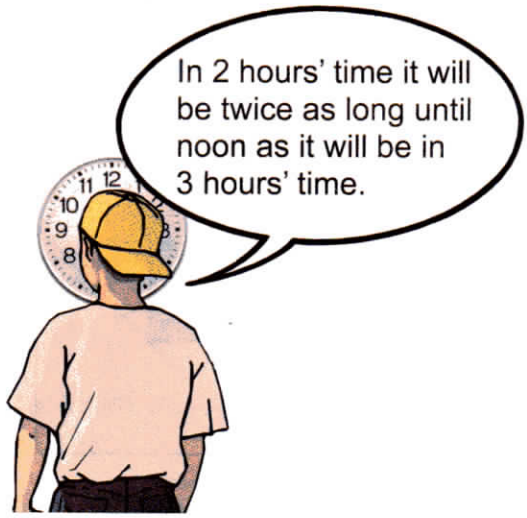
The distance between the 2nd stop and the 4th stop is 25 kilometres.

The distance between the 1st stop and the 4th stop is 33 kilometres.

What is the distance between the 2nd stop and the 3rd stop, in kilometres?

(A) 8
(B) 11
(C) 14
(D) 17

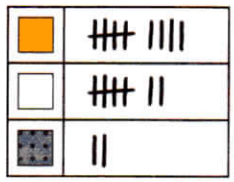
29. Tim looked at the clock and said,



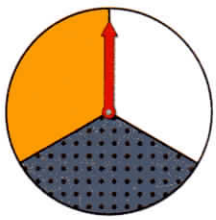
What is the time on the clock?

(A) 6:00 am
(B) 7:00 am
(C) 8:00 am
(D) 9:00 am

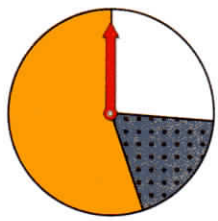
30. Liam spun a spinner 18 times and recorded his results.



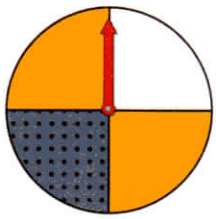
Which one of these spinners is most likely to be Liam's?



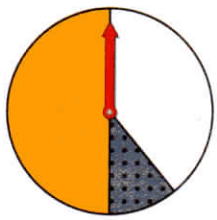
(A)



(B)



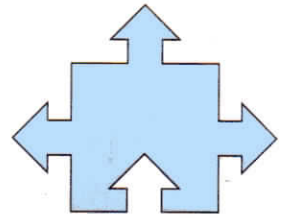
(C)



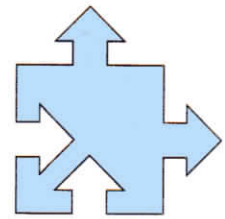
(D)

31. Jin is completing a puzzle. All of the pieces are the same shape and fit together without gaps or overlaps.

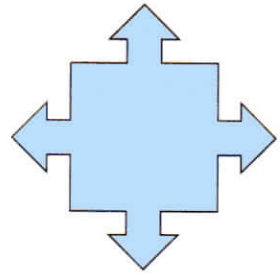
Which of these could be Jin's puzzle piece?



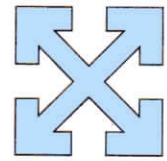
(A)



(B)

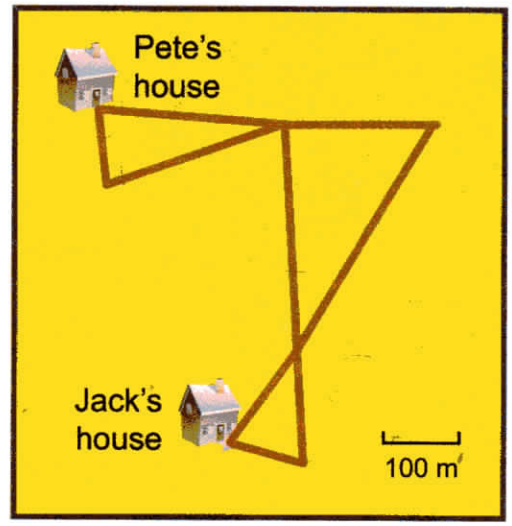


(C)



(D)

32. This map shows the bush tracks near Pete's house and Jack's house.



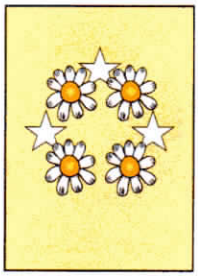
Pete walked to Jack's house by the shortest route.

About how far did he walk?

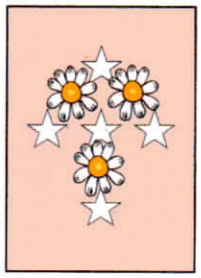
(A) 600 metres
(B) 700 metres
(C) 800 metres
(D) 900 metres

33. Sana made birthday and wedding cards.

Each birthday card had three stars and four flowers. Each wedding card had five stars and three flowers.



Birthday card



Wedding card

Sana had 101 stars. She made twelve birthday cards. She used the remaining stars to make wedding cards.

How many flowers did she need to make all the birthday cards and wedding cards?

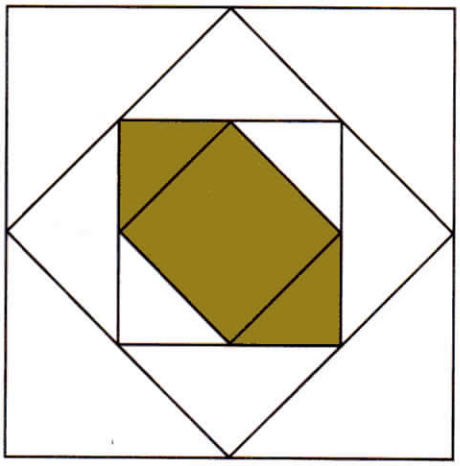
(A) 87 (B) 84
(C) 48 (D) 39

34. Jane was in a sailing race. She sailed south-west from the start. Jane then made a quarter turn anti-clockwise and sailed the same distance to the finish.

Which statement is true?

(A) The start was east of the finish.
(B) The start was west of the finish.
(C) The finish was south of the start.
(D) The finish was north of the start.

35. Senin drew a design with squares.



He shaded part of his design.

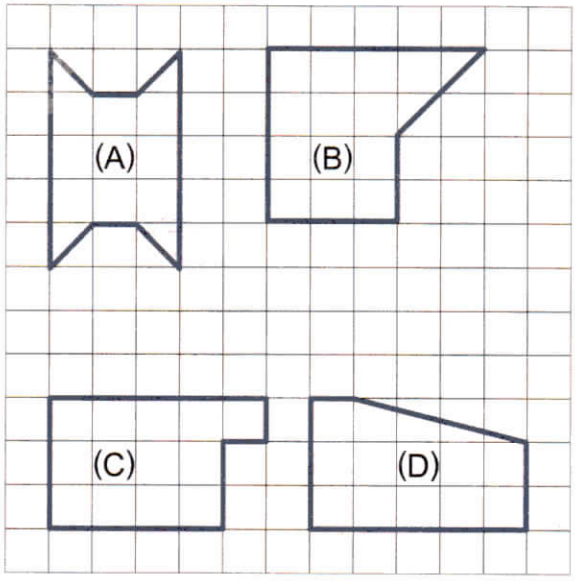
What fraction of his design did he shade?

(A) $\frac{3}{13}$ (B) $\frac{4}{14}$

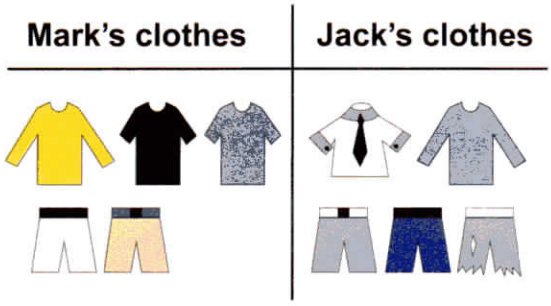
(C) $\frac{6}{16}$ (D) $\frac{6}{32}$

36. Yara drew some shapes on a grid.

Which shape has the largest perimeter?



37. Mark and Jack are brothers. They share each other's clothes if the clothes fit.



Jack can wear Mark's shirts but not his pants.

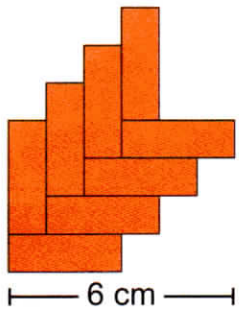
Mark cannot wear any of Jack's clothes.

An outfit consists of a shirt and pants that both fit.

How many different outfits do the brothers have between them?

(A) 10
(B) 12
(C) 21
(D) 25

38. This shape is made up of 8 identical rectangles.



The shape is 6 cm wide.

What is the perimeter of this shape?

(A) 24 cm
(B) 26 cm
(C) 48 cm
(D) 64 cm

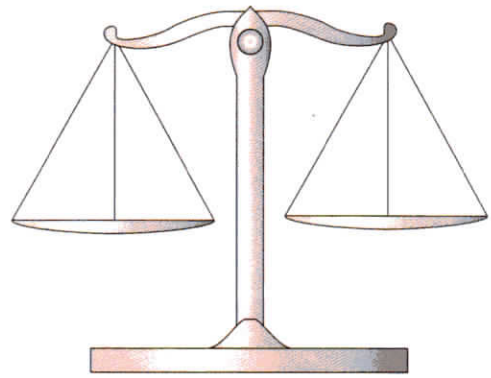
39. Manu uses only the digits 2 and 5 to make different three-digit numbers. For example, 252 and 222 are two possible numbers.

What is the sum of all of Manu's possible three-digit numbers?

(A) 1554
(B) 1779
(C) 2331
(D) 3108

40. Jia has 24 gold earrings that look identical. However, one of the earrings is fake gold. It weighs less than each of the other earrings.

Jia only has this balance scale.



What is the least number of times Jia must use the balance scale to identify the fake gold earring, without relying on luck?

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

Acknowledgment

The following year levels should sit THIS Paper:

Australia	Year 5
Brunei	Primary 5
Indonesia	Year 6
Malaysia	Standard 5
New Zealand	Year 6
Pacific Region	Year 6
Singapore	Primary 4
South Africa	Grade 5

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QUESTION NUMBER	PAPER A	PAPER B	PAPER C	PAPER D	PAPER E	PAPER F	PAPERS G & H	PAPERS I & J
1	D	D	C	B	A	D	A	A
2	A	B	D	A	B	C	A	C
3	C	C	A	D	A	D	B	D
4	B	B	C	C	D	A	C	C
5	C	C	D	A	D	C	D	D
6	A	B	C	B	C	C	B	D
7	C	B	B	D	D	B	C	A
8	B	A	B	D	C	C	D	D
9	A	C	C	B	B	A	C	C
10	A	D	A	C	A	C	D	B
11	D	C	B	B	D	D	C	B
12	B	D	D	C	B	B	D	A
13	A	A	C	A	B	D	A	C
14	A	B	B	B	D	C	C	B
15	D	A	B	A	C	D	D	B
16	B	B	D	A	D	B	D	C
17	C	A	A	D	B	D	A	A
18	A	D	A	D	C	A	C	A
19	C	C	D	C	B	D	B	D
20	B	C	B	A	C	D	B	B
21	A	B	C	A	A	B	A	D
22	C	A	D	C	A	C	C	C
23	D	C	C	D	D	B	D	B
24	C	B	D	C	C	A	A	A
25	D	B	A	D	D	D	C	C
26	A	C	B	B	D	C	B	B
27	D	D	A	A	A	B	C	D
28	C	A	C	B	B	A	B	B
29	B	B	C	D	A	B	D	B
30	D	D	D	C	B	C	C	C

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QUESTION NUMBER	PAPER A	PAPER B	PAPER C	PAPER D	PAPER E	PAPER F	PAPERS G & H	PAPERS I & J
31	B	D	B	B	C	A	B	D
32	A	B	B	C	A	C	A	D
33	C	A	A	A	B	B	B	A
34	D	C	C	C	C	B	A	A
35	C	C	D	B	A	A	B	C
36	A	D	A	58|058	35|035	14|014	204	204
37	C	A	C	126	67|067	30|030	20|020	750
38	B	D	B	65|065	963	162	216	15|015
39	D	C	D	98|098	14|014	12|012	184	27|027
40	A	D	B	300	288	288	89|089	765

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