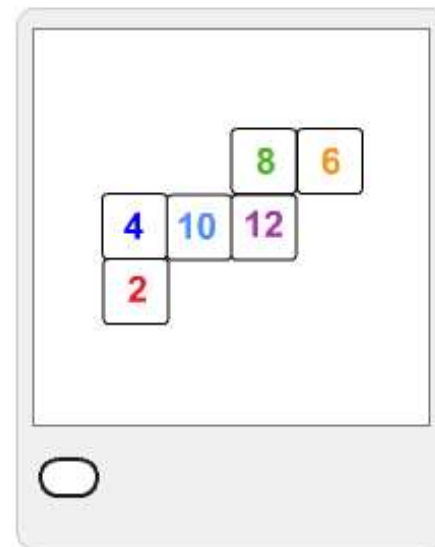
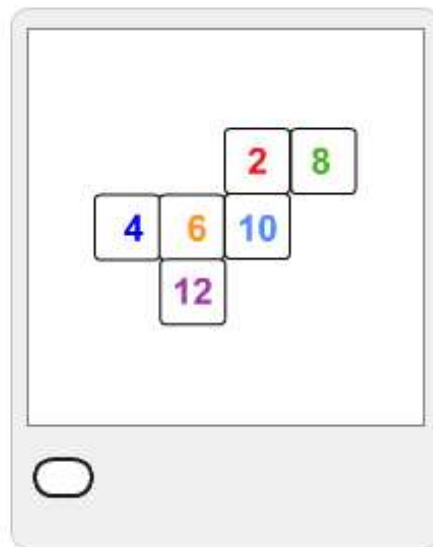
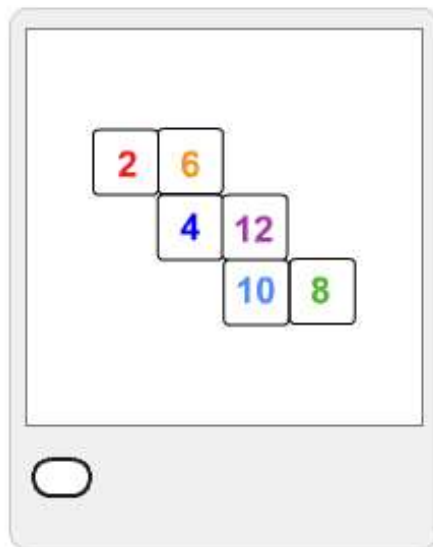
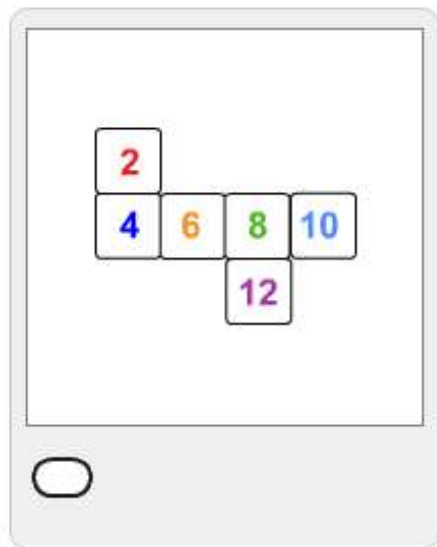
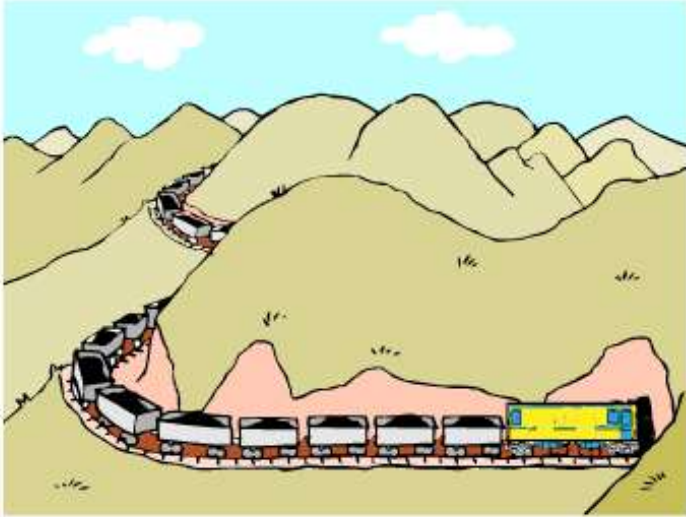


Isabella makes a die on which the values of its opposite faces add up to 14.

Which of the following nets represents Isabella's die?





A coal train is 2 kilometres in length and is travelling at a constant speed of 30 km/h through hilly country.

It travels through a tunnel that is 2 kilometres long.

If the train enters the tunnel at exactly 4:04 pm, at what time will the train have completely left the tunnel?

☐ 4:08 pm

☐ 4:10 pm

☐ 4:12 pm

☐ 4:20 pm



Lynda read 120 pages of her book during the weekend.

On Monday night she read half of the remaining pages.

On Tuesday night she read 20 pages.

On Wednesday night she read the remaining 10 pages.

How many pages were in the book in total?

☐ 150 pages

☐ 180 pages

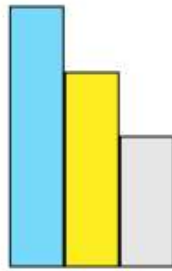
☐ 200 pages

☐ 240 pages

Kate and Craig look at this group of blocks from opposite sides.

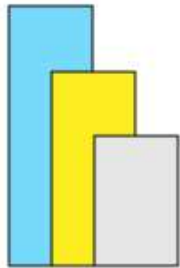


Kate

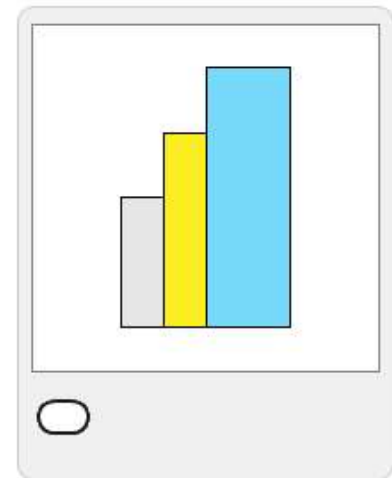
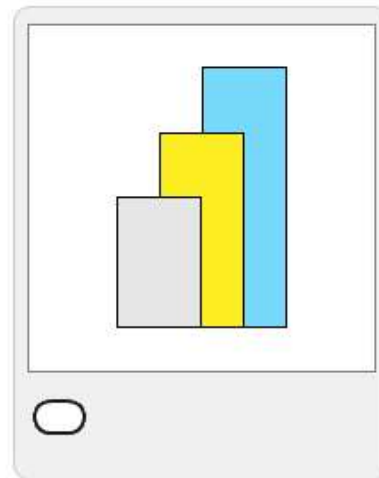
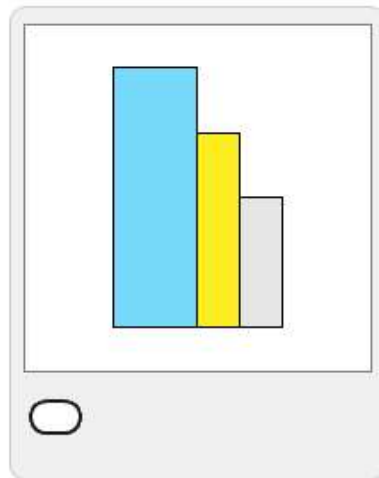
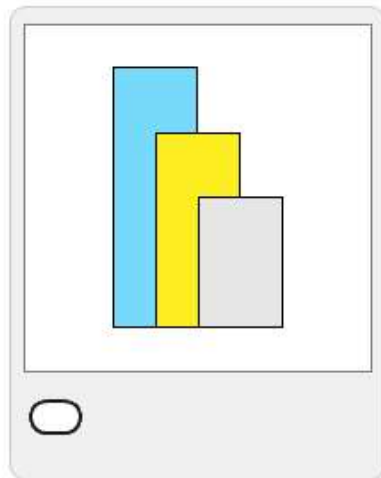


Craig

Craig sees



What does Kate see?





Neil is standing in a queue at the checkout.

He notices that there are three more people behind him than in front of him.

There are 18 people in the queue in total.

What is Neil's position in the queue?

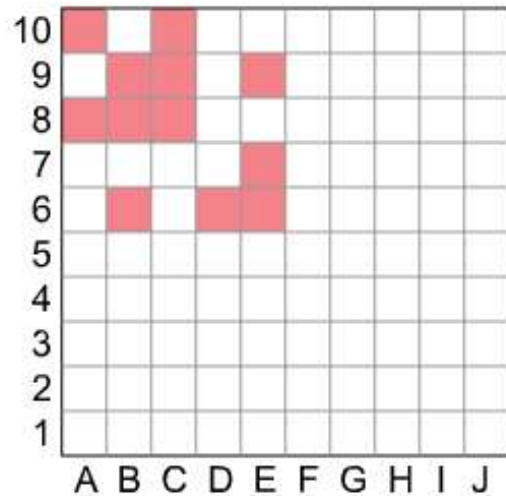
☐ 8th

☐ 9th

☐ 10th

☐ 11th

This design is to have quarter-turn symmetry. Every time it is turned through 90° about the centre the design will look the same as it did originally.



Which square will **not** be shaded when the design is complete?

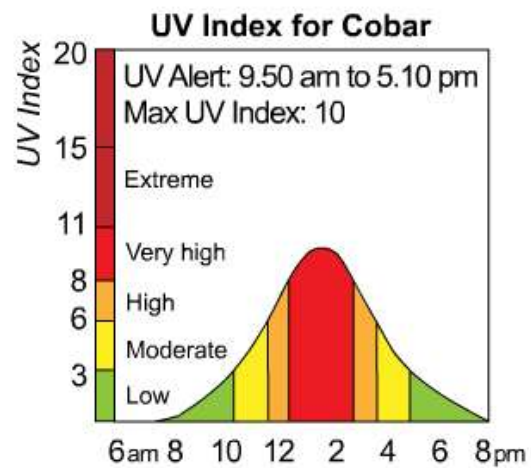
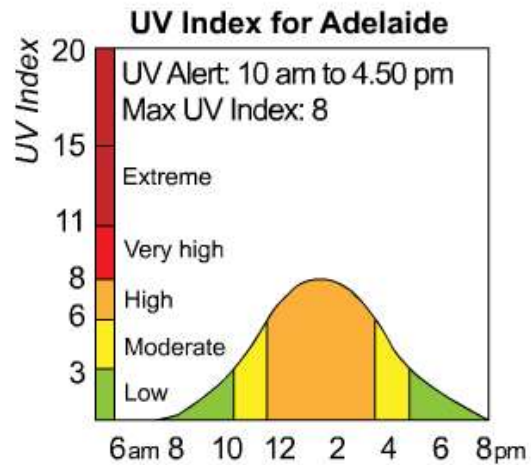
☐ F2

☐ G5

☐ H3

☐ I4

The forecast graphs show the (Ultra-violet) UV index for two locations.



Leonie lives in Cobar and plans a short walk at 14:00.

What is the UV Index during her walk?

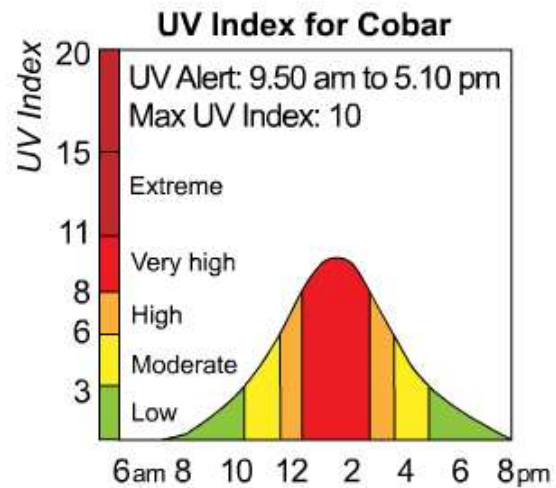
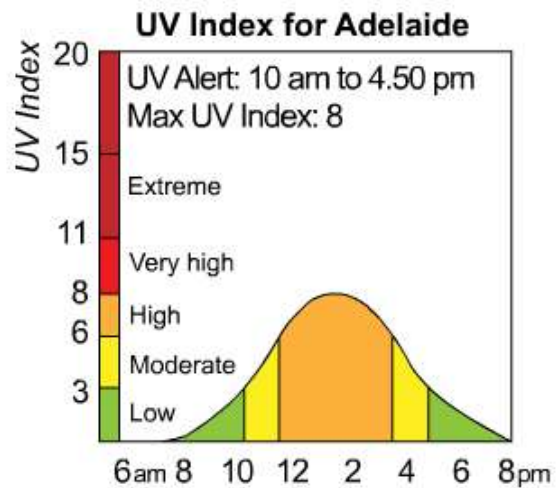
☐ Extreme

☐ Very High

☐ High

☐ Moderate

The forecast graphs show the (Ultra-violet) UV index for two locations.



How much longer is the UV Alert in Cobar than in Adelaide?

☐ 10 min

☐ 20 min

☐ 30 min

☐ 1 h 10 min

$$\frac{16}{\Delta} = \frac{\Delta}{25}$$

What is the value of Δ ?

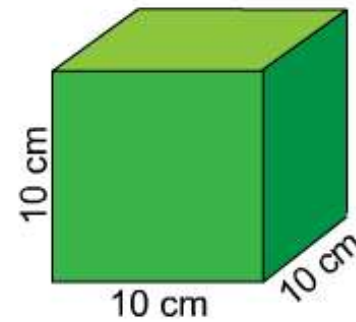
☐ 12

☐ 18

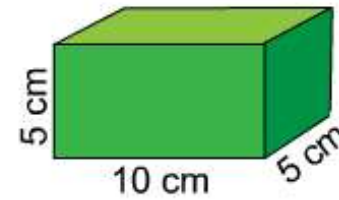
☐ 20

☐ 24

This cube is solid and has a mass of 1 kilogram.



A new solid is formed using the same material.



What is the mass of the new solid?

$$\frac{1}{25} \text{ kg}$$



$$\frac{1}{4} \text{ kg}$$



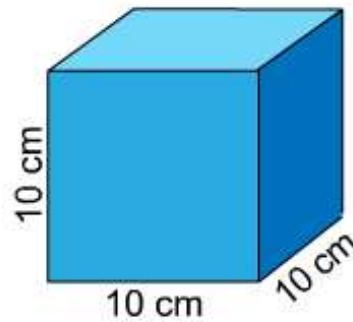
$$\frac{1}{2} \text{ kg}$$



$$\frac{3}{4} \text{ kg}$$



This cube is solid and has a mass of 1 kilogram.



A new rectangular prism is to be made from the same material as the cube.

What could be the dimensions of the prism if it was to have a mass double that of the cube?

$20\text{ cm} \times 10\text{ cm} \times 5\text{ cm}$



$20\text{ cm} \times 20\text{ cm} \times 10\text{ cm}$



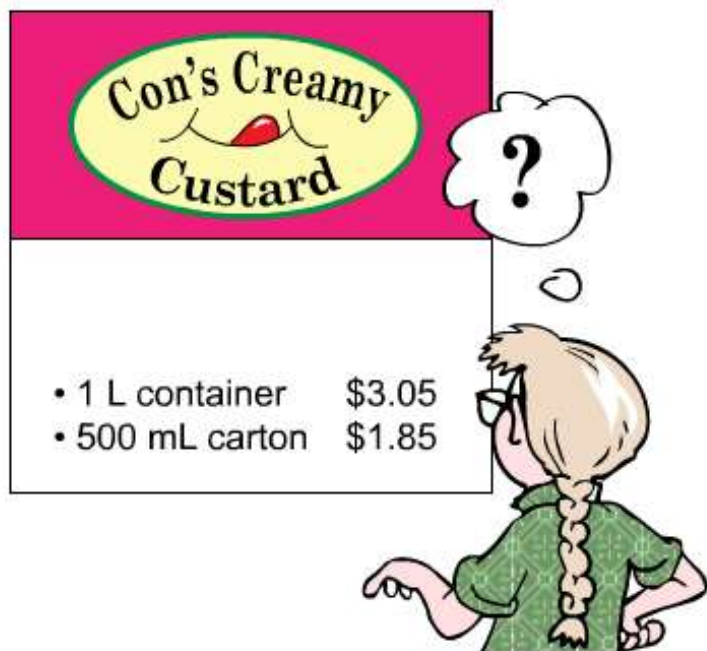
$40\text{ cm} \times 10\text{ cm} \times 5\text{ cm}$



$20\text{ cm} \times 20\text{ cm} \times 20\text{ cm}$



Jacquie wants to buy 2 litres of custard.



How much will she save by buying the 1-L containers compared to the 500-mL cartons?

☐ \$1.20

☐ \$1.30

☐ \$6.10

☐ \$7.40



Steffi wanted to divide by 50, but instead, by mistake, she multiplied by 50. Her answer was 5000.

What should her answer have been?

☐ 2

☐ 25

☐ 100

☐ 25 000



A plastic jug is half full of gravy and the mass of the jug and gravy together is 500 grams.

When it is completely filled, the mass increases to 950 grams.

What is the mass of the empty jug?

☐ 10 g

☐ 50 g

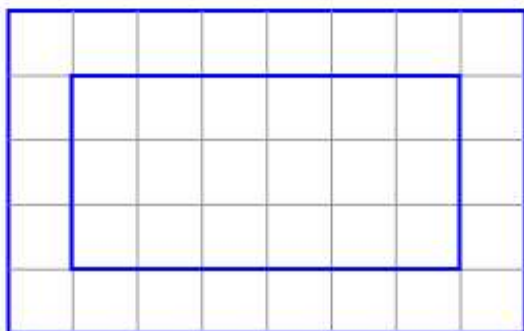
☐ 150 g

☐ 450 g

The grid is made up of small identical squares.

Two rectangles have been drawn on the grid.

The inside rectangle has perimeter 36 cm.



What is the perimeter of the outside rectangle?

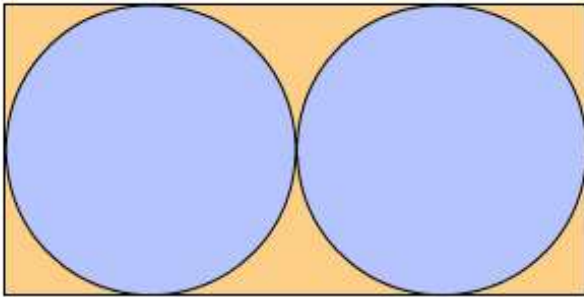
☐ 40 cm

☐ 44 cm

☐ 48 cm

☐ 52 cm

A rectangle encloses two circles which each have a radius of 4 cm.



What is the area of the rectangle?

8 cm²

64 cm²

128 cm²

144 cm²

These are the first few steps in a pattern:

Step 1: $2 \times 0 + 1 = 1$

Step 2: $3 \times 1 + 1 = 4$

Step 3: $4 \times 2 + 1 = 9$

Step 4: $5 \times 3 + 1 = 16$

Step 5: $6 \times 4 + 1 = 25$

Step 6: $7 \times 5 + 1 = 36$

Which is **not** a step in this pattern?

$13 \times 11 + 1 = 144$

☐

$21 \times 19 + 1 = 200$

☐

$51 \times 49 + 1 = 2500$

☐

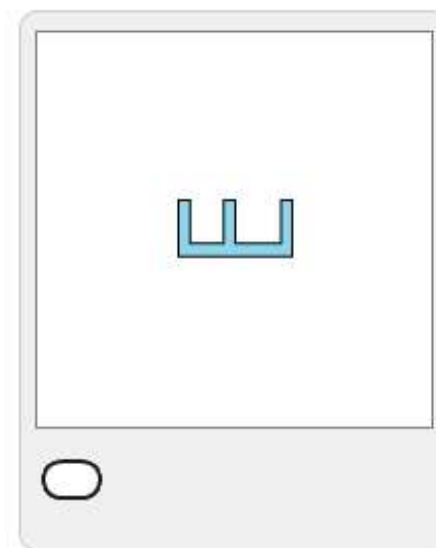
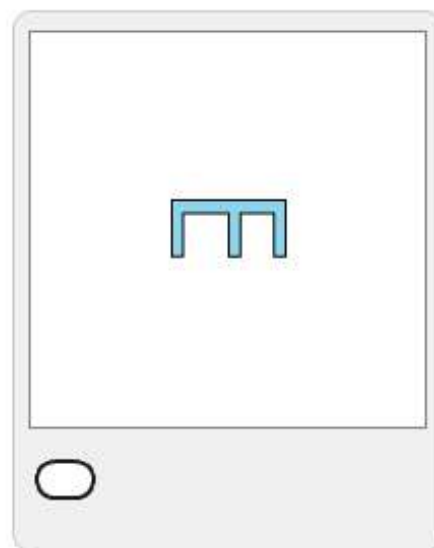
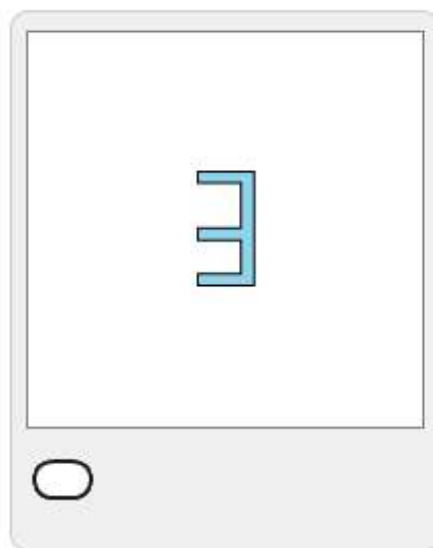
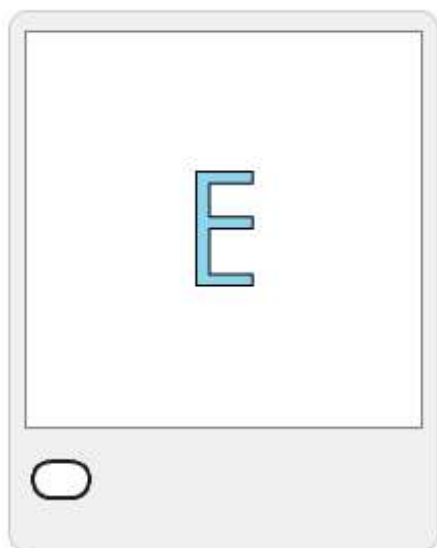
$101 \times 99 + 1 = 10000$

☐

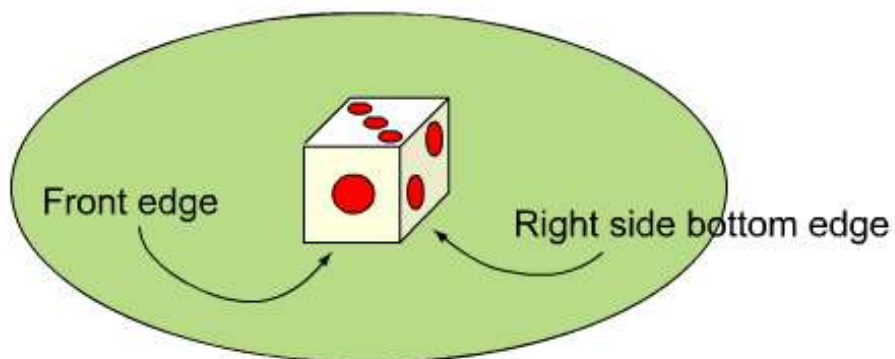
The first eight figures in a pattern of rotations are shown below.



What will be the tenth figure?



A die is sitting on a table as shown with a 3 showing on the top face. The numbers on the opposite faces of the die all add to 7.



The die is rolled over the right side bottom edge so that 2 is on the bottom of the die. Then it is rolled over the new front edge.

What number is now at the top of the die?

☐ 3

☐ 4

☐ 5

☐ 6

A tour company charges a different percentage of the cost of a tour for cancellations at various times.

The table below shows the cancellation charges:

| | | | | | | | |
|--------------------------------|-------|-------|-------|-------|-------|-------|------|
| Days before departure | 56–50 | 49–43 | 42–36 | 35–29 | 28–22 | 21–15 | 14–0 |
| Percentage cancellation charge | 10% | 20% | 30% | 45% | 50% | 60% | 100% |

On 16 April, Margot cancelled her tour that was to depart on 30 May.

If the tour cost \$1500, what was the cancellation charge?

☐ \$150

☐ \$300

☐ \$450

☐ \$600