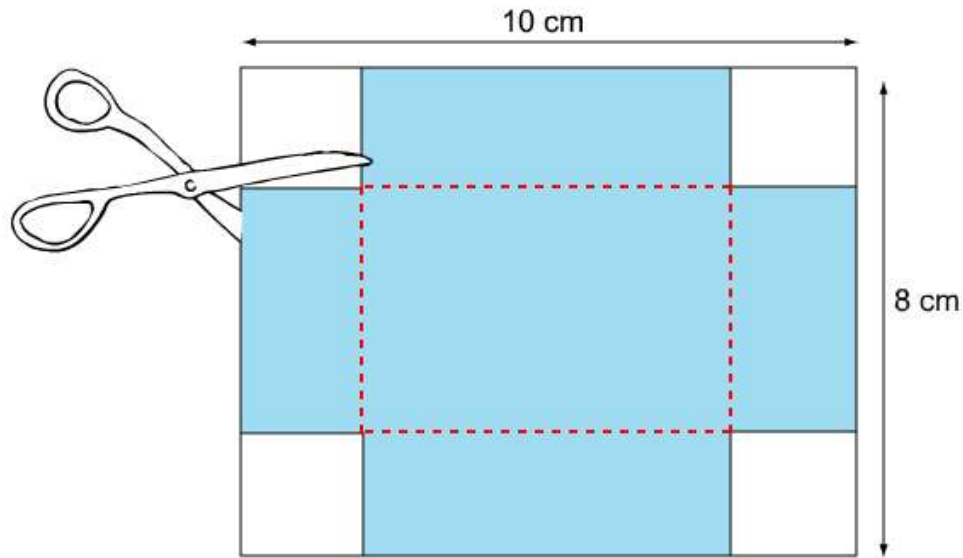


A rectangle measures 10 cm by 8 cm.

Squares of side 1 cm are cut from each corner of the rectangle.

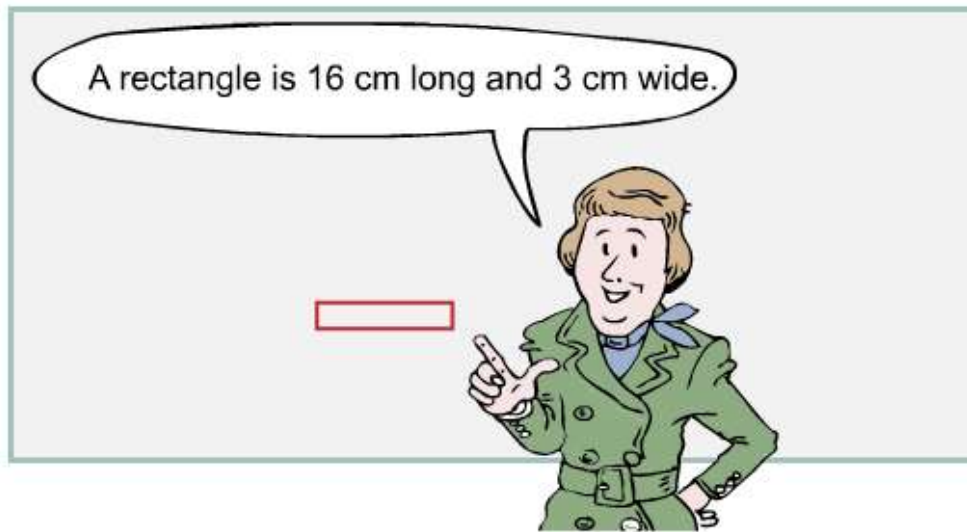


(Not to scale)

The dotted lines are used to fold the shape into a box without a lid.

What is the volume of the box?

  
☐  
☐  
☐  
☐



A new rectangle is formed by halving the length and doubling the breadth.

What happens to the area and perimeter of the new rectangle compared to the old rectangle?

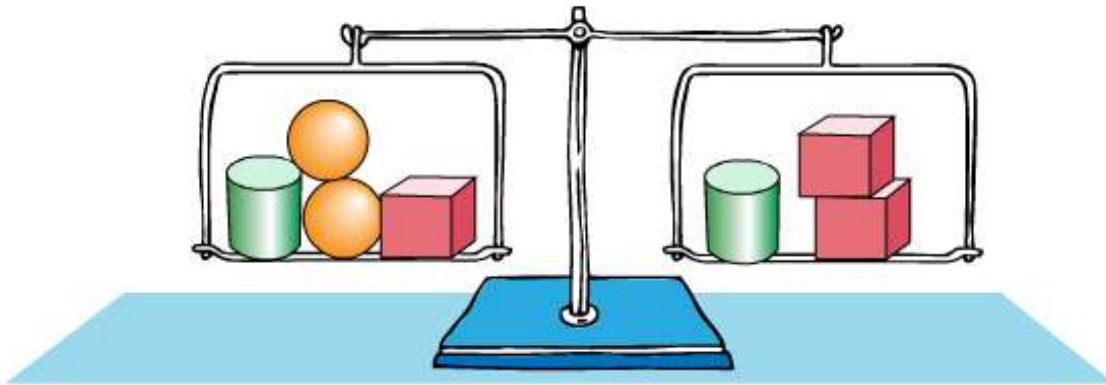
☐ The area is the same and the perimeter decreases.

☐ The area is the same and the perimeter increases.

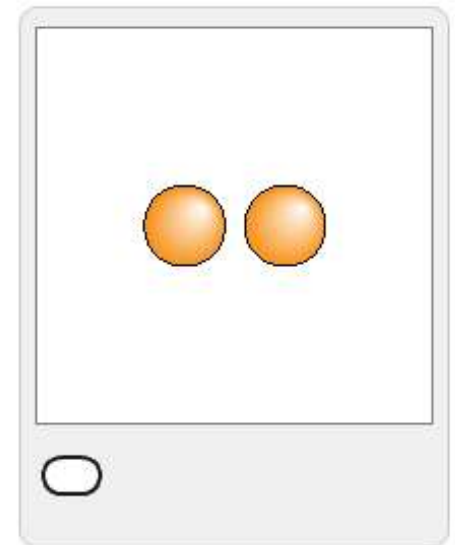
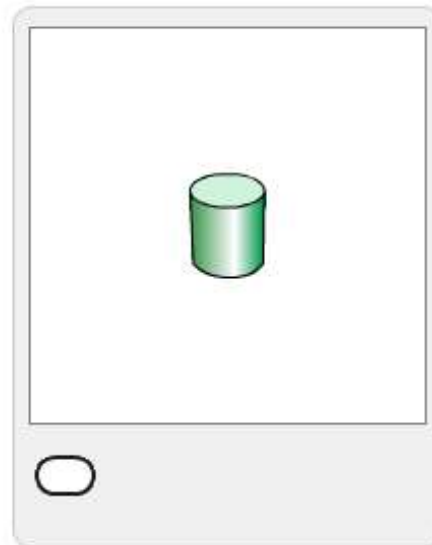
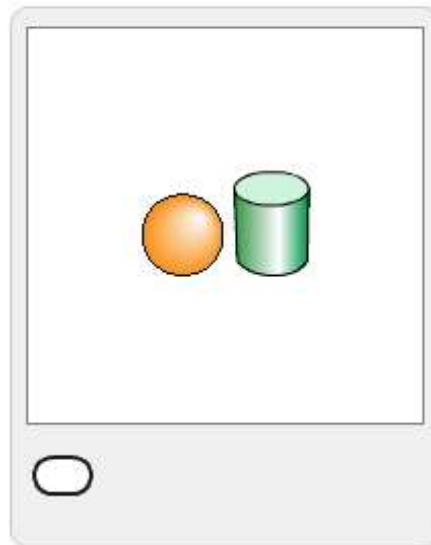
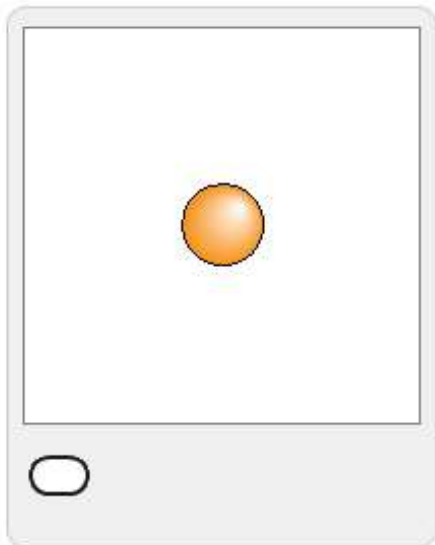
☐ The area and perimeter are the same.

☐ The area decreases and the perimeter is the same.

The diagram shows a balance with balls and blocks.

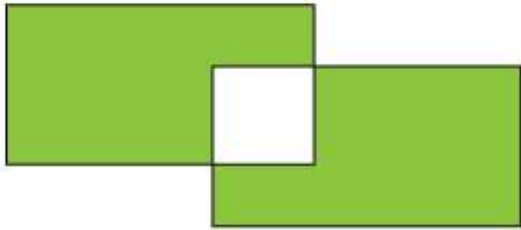


The mass of block  is the same as



The diagram shows two identical rectangles that overlap.

The area of each rectangle is  $32 \text{ cm}^2$ .



The overlap is in the shape of a square that has an area of  $8 \text{ cm}^2$ .

What is the area of the shaded section in the diagram?

24  $\text{cm}^2$

☐

40  $\text{cm}^2$

☐

48  $\text{cm}^2$

☐

56  $\text{cm}^2$

☐



Eighty Year 6 students are assembled at school.

Using your own weight as a guide, the total weight of all 80 students could be about

☐ 350 kg

☐ 3.5 t

☐ 35 t

☐ 350 t

Students in Years 4, 5 and 6 were asked to name their favourite colour. The table shows the results.

---

	Red	Blue	Green	Yellow
Year 4	5	8	7	12
Year 5	6	5	7	11
Year 6	10	5	4	8

How many more Year 4 students than Year 5 students were asked to name their favourite colour?

☐ 1

☐ 2

☐ 3

☐ 4

Students in Years 4, 5 and 6 were asked to name their favourite colour. The table shows the results.

	Red	Blue	Green	Yellow
Year 4	5	8	7	12
Year 5	6	5	7	11
Year 6	10	5	4	8

What fraction of Year 6 students favour the colour yellow?

$$\frac{8}{27}$$

$$\frac{8}{31}$$

$$\frac{8}{19}$$

$$\frac{1}{3}$$



Ming arrived home at 9:15 pm. This was  $10\frac{3}{4}$  hours after she left home.

What time did Ming leave home?

☐ 10:10 am

☐ 10:30 am

☐ 11:10 am

☐ 11:30 am





Austin has an appointment in Sunshine Bay in 40 minutes.

What is the slowest speed that Austin can travel to arrive on time for his appointment if Sunshine Bay is 50 kilometres away?

☐ 20 km/h

☐ 75 km/h

☐ 90 km/h

☐ 125 km/h



Layoun can walk the 5 kilometres from his home to his grandparents' home in  $1\frac{1}{2}$  hours.

If he can ride six times as fast as he can walk, how long will it take Layoun to ride from his home to his grandparents' home?

☐ 10 minutes

☐ 15 minutes

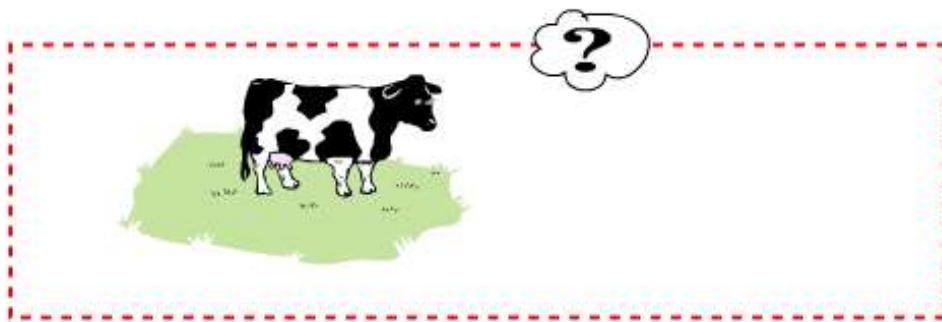
☐ 18 minutes

☐ 25 minutes

A butcher shop, a newsagency and a bank are all on the same side of a street. The butcher shop is 150 metres from the newsagency and the bank is 260 metres from the butcher shop.

Which statement is correct?

- ☐ The bank must be 110 metres from the newsagency.
- ☐ The bank must be 410 metres from the newsagency.
- ☐ The bank could be 300 metres from the newsagency.
- ☐ The bank could be 110 or 410 metres from the newsagency.



A rectangular paddock has an area of 2.4 hectares.

The paddock could be

☐ 800 m by 300 m

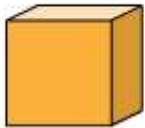
☐ 300 m by 120 m

☐ 8000 m by 30 m

☐ 600 m by 40 m

The surface area of a solid is the sum of the areas of each of its faces.

---



What is the surface area of a cube, in square centimetres, if each side is 4 centimetres long?

☐ 32

☐ 64

☐ 96

☐ 216



Guy is training for a long distance run.

He trains by running around the outside of a sports field that is in the shape of a rectangle.

The rectangular field is 200 metres long and 100 metres wide.

If Guy runs at 12 km/h, how long will it take him to run five laps of the sports field?

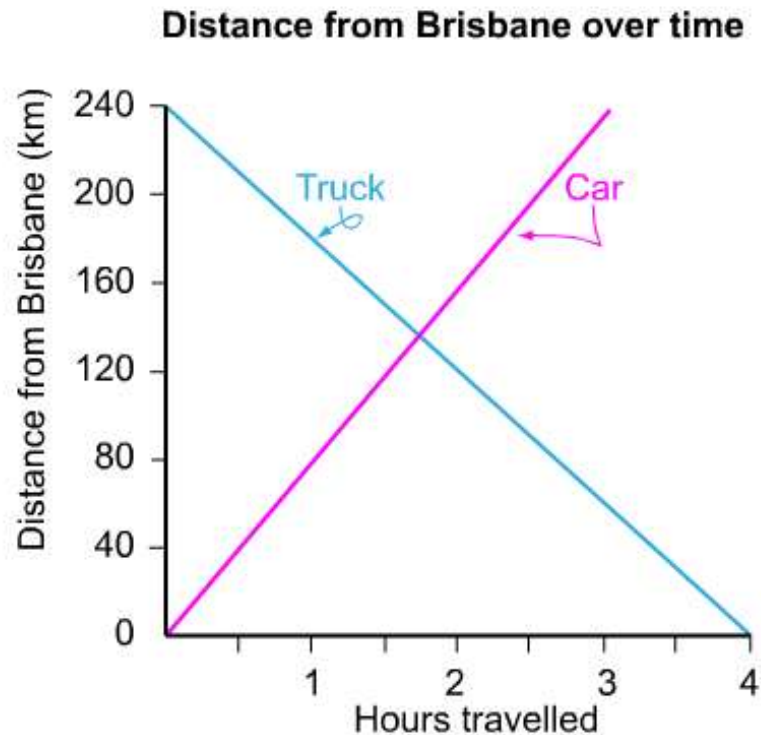
☐ 10 minutes

☐ 15 minutes

☐ 20 minutes

☐ 30 minutes

Kilkivan is 240 kilometres from Brisbane. A car leaves Brisbane to travel to Kilkivan. At the same time, a truck leaves Kilkivan to travel to Brisbane. The distance that both the car and truck are from Brisbane at different times is shown on the graph.



About how far from Kilkivan are both the car and truck when they pass?

☐ 160 km

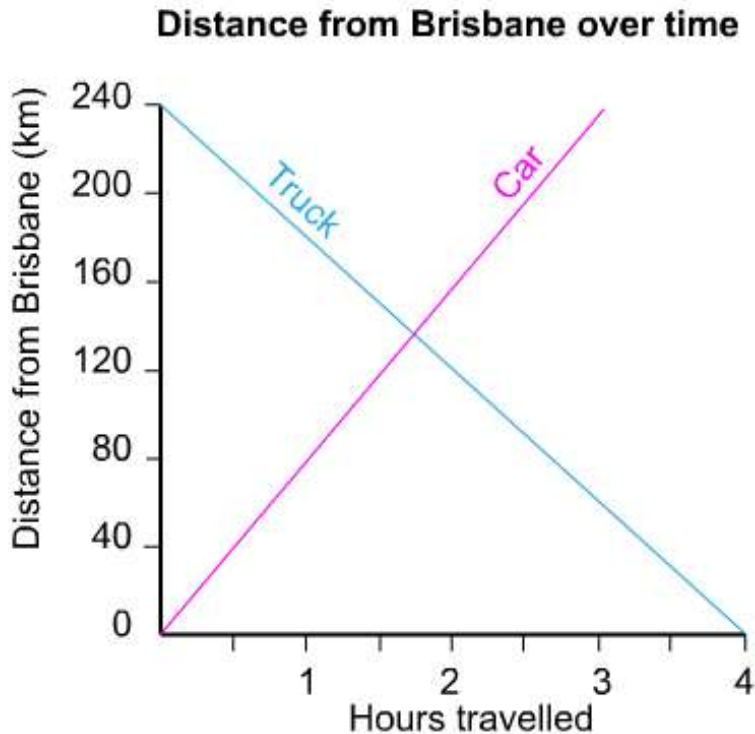
☐ 140 km

☐ 120 km

☐ 100 km



Kilkivan is 240 kilometres from Brisbane. A car leaves Brisbane to travel to Kilkivan. At the same time, a truck leaves Kilkivan to travel to Brisbane. The distance that both the car and truck are from Brisbane at different times is shown on the graph.



How far is the truck from Brisbane when the car reaches Kilkivan?

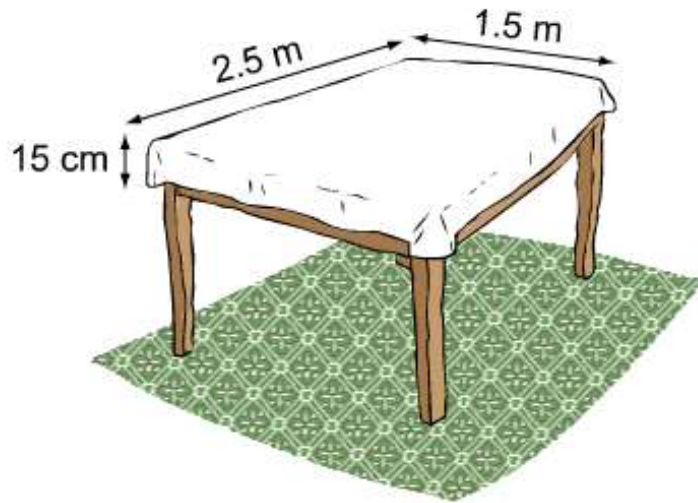
☐ 60 km

☐ 80 km

☐ 160 km

☐ 180 km





Natalie has a table that is 2.5 metres long and 1.5 metres wide. A tablecloth sits on the table with 15 centimetres hanging down over each of its edges.

Natalie has another table that is slightly larger and for which this tablecloth is too small. She intends to sew a border on the cloth so that it will exactly fit the top of the larger table.

Natalie needs to obtain some material for the border.

What is the smallest length of material Natalie will need to make the border?

☐ 8 m

☐ 8.6 m

☐ 9.2 m

☐ 9.8 m



---

A sheet of paper is 0.07 millimetres thick.

What is the thickness of 500 sheets of paper?

☐ 1.2 cm

☐ 3.5 cm

☐ 12 cm

☐ 35 cm



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500 sheets of paper weigh 2.5 kilograms.

What is the weight of a single sheet of paper?

☐ 5 g

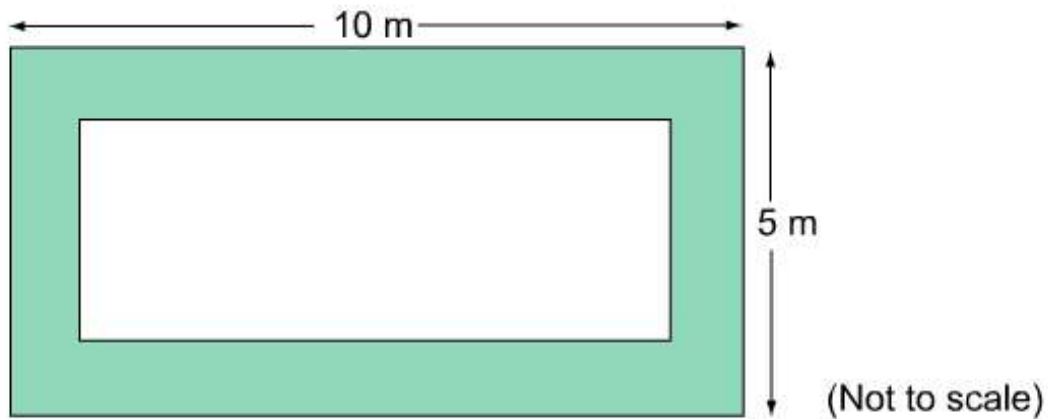
☐ 12.5 g

☐ 50 g

☐ 125 g

The diagram shows a rectangle measuring 10 m by 5 m, and a smaller rectangle inside.

A 1-m wide shaded border has been drawn.



What percentage of the large rectangle has been shaded?

☐ 36%

☐ 48%

☐ 52%

☐ 64%