

Area Word Problems

1. Each table in a classroom is 110cm long and 55cm wide. What is the area of each table in square centimetres and square metres?

- a) There are 16 tables in a classroom. What is the total area of the tables in the classroom in square metres?

2. An artificial football pitch is 92 metres long and 41 metres wide. There is a border of grass all around the edge of the pitch that is 2 metres wide. What is the area of the whole artificial surface?

- a) If the cost of the pitch is £38 per square metre, what is the cost of installing the pitch?

3. A bedroom is 3.5m long and 2.4m wide and 2.1m high. Ignoring the door and window, what is the total area of the walls in the bedroom?

- a) A tin of paint will cover 20m^2 . How many tins are needed if the walls all need 2 coats of paint?

4. A window is 1.7m wide and 85cm high. What is the area of the window?

- a) Three times the area of the window is needed for curtain material. What area of material is needed?

5. A car park space needs 8 square metres for 1 car. Just considering the spaces for parking, what dimensions for a car park would be needed for 62 cars?

- a) What else needs to be taken into account?

6. A carpet costs £4.99 per square metre and underlay costs £2.99 per square metre. A bedroom measures 3.7m by 2.6m. How much will it cost to lay underlay and carpet in the bedroom?
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7. A patio measures 245cm by 435cm. What is the area of the patio in square metres?
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a) If the stone tiles measure 75cm by 30cm, how many will be needed to cover the patio? When stones need to be cut, the unused piece is not used elsewhere on the patio.

b) Does it matter which way round the stones are laid?

8. A cleaner polishes a sports hall floor. The hall is 45m wide and 82m long. One tin of polish will cover 150 square metres of the floor. How many tins are needed to polish the floor?
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a) It will take the cleaner 30 minutes to polish 100 square metres of the floor. How long, to the nearest minute, will it take to polish the floor?

9. A team of volunteers need to clean a beach. At high tide the beach is 120m long, and 25m wide. Each volunteer can clean up 10 square metres in 5 minutes. How many people will be needed to clean up the beach in an hour?
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10. A field of wheat measures 115 metres by 82 meters. What is the area of the field?
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a) A combine harvester harvests the field in 45 minutes. How many square metres does the combine harvester harvest each minute?



Area Word Problems **Answers**

1. Each table in a classroom is 110cm long and 55cm wide. What is the area of each table in square centimetres and square metres?

6050cm², 0.605m²

a) There are 16 tables in a classroom. What is the total area of the tables in the classroom in square metres?

9.68m²

2. An artificial football pitch is 92 metres long and 41 metres wide. There is a border of grass all around the edge of the pitch that is 2 metres wide. What is the area of the whole artificial surface?

4320m²

a) If the cost of the pitch is £38 per square metre, what is the cost of installing the pitch?

£164 160

3. A bedroom is 3.5m long and 2.4m wide and 2.1m high. Ignoring the door and window, what is the total area of the walls in the bedroom?

(3.5m + 2.4m) x 2 x 2.1m = 24.78m²

a) A tin of paint will cover 20m². How many tins are needed if the walls all need 2 coats of paint?

3 tins

4. A window is 1.7m wide and 85cm high. What is the area of the window?

1.445m²

a) Three times the area of the window is needed for curtain material. What area of material is needed?

4.335m²

5. A car park space needs 8 square metres for 1 car. Just considering the spaces for parking, what dimensions for a car park would be needed for 62 cars?

496m²

a) What else needs to be taken into account?

Space to drive around.

6. A carpet costs £4.99 per square metre and underlay costs £2.99 per square metre. A bedroom measures 3.7m by 2.6m. How much will it cost to lay underlay and carpet in the bedroom?

$$(\text{£}4.99 + \text{£}2.99) \times (3.7\text{m} \times 2.6\text{m}) = \text{£}76.77$$

7. A patio measures 245cm by 435cm. What is the area of the patio in square metres?

$$10.66\text{m}^2$$

a) If the stone tiles measure 75cm by 30cm, how many will be needed to cover the patio? When stones need to be cut, the unused piece is not used elsewhere on the patio.

$$(245\text{cm} \div 30\text{cm}) (435\text{cm} \div 75\text{cm}) \text{ or } (435\text{cm} \div 30\text{cm}) (245\text{cm} \div 75\text{cm}) 6 \times 9 = 54 \text{ or } 15 \times 4 = 60$$

b) Does it matter which way round the stones are laid?

Yes

8. A cleaner polishes a sports hall floor. The hall is 45m wide and 82m long. One tin of polish will cover 150 square metres of the floor. How many tins are needed to polish the floor?

$$\text{Area} = 3690\text{m}^2 \text{ so } 25 \text{ tins}$$

a) It will take the cleaner 30 minutes to polish 100 square metres of the floor. How long, to the nearest minute, will it take to polish the floor?

$$18 \text{ hours and } 27 \text{ minutes } (18.45 \text{ hours})$$

9. A team of volunteers need to clean a beach. At high tide the beach is 120m long, and 25m wide. Each volunteer can clean up 10 square metres in 5 minutes. How many people will be needed to clean up the beach in an hour?

$$\text{Area} = 3000\text{m}^2, \text{ one volunteer } 120\text{m}^2 \text{ in one hour, so } 3000 \div 120 = 25 \text{ people.}$$

10. A field of wheat measures 115 metres by 82 meters. What is the area of the field?

$$9430\text{m}^2$$

a) A combine harvester harvests the field in 45 minutes. How many square metres does the combine harvester harvest each minute?

$$9430 \div 45 = 209.56 \text{ m}^2$$

