Real World Area Problems

Challenge Cards
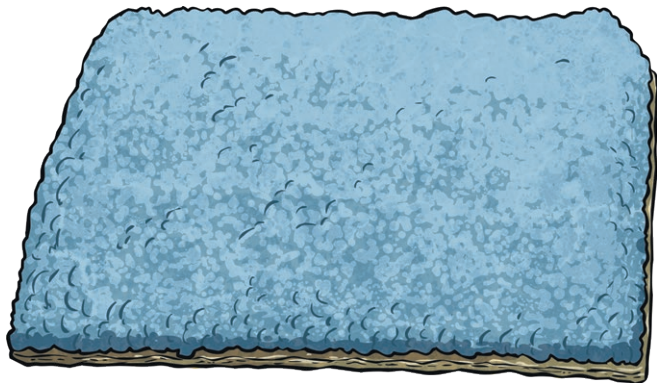
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1. Janice is retiling her bathroom. Her bathroom is 3m by 1m. How many square metres of tiles will she need to cover the bathroom floor?

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2. Javier is laying a carpet in his basement. His basement measures 4m by 3m. How many square metres of carpet will he need for his basement floor?

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3. Soechee is painting her bedroom. One wall measures 3m high by 2m long. How many square metres of paint will she need to paint the wall?

4. Mrs. Whitacker is buying a rug for her bedroom. She wants a rug which is less than 5m². She could buy a rug that measures 2m by 2m or a rug that measures 2m by 3m. Which rug should she buy? Why?

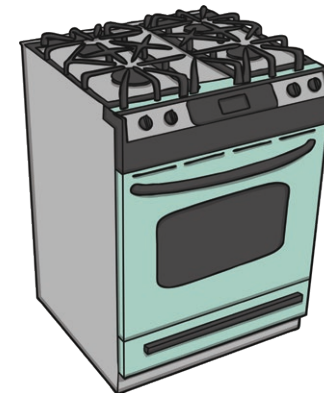5. Khalil is laying concrete on his patio. The patio is 2m long by 4m wide. How many square metres of concrete will Khalil need?

6. Raji is painting a canvas in a school hall that is 1m tall by 1m wide. How much paint will he need for his base coat on the canvas?
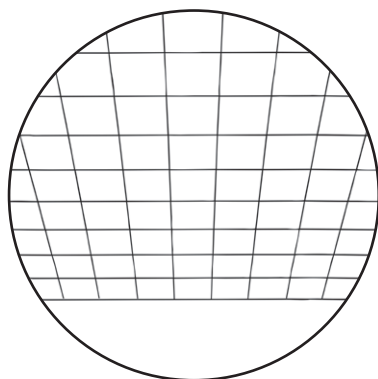
7. Taylor is putting tiles up behind her cooker. The area behind her stove is 1m long by $\frac{1}{2}$m high. How many square metre tiles will she need?

8. Mr. and Mrs. Vasquez are retiling a wall in their bathroom. The wall measures 3m by 2m. How many square metre tiles do they need?

9. Carolyn is painting an accent wall in her bedroom. The wall is 2m high and 3m long. How many square metres of paint will she need to cover the wall?

10. A baker is icing the top of a rectangular cake with pink icing. If the cake measures 15cm long and 10cm wide, how many square centimetres of icing will the baker need for the top of the cake?

Happy Birthday

11. Mick is painting his living room. He has enough paint to paint 16m^2. The wall he is painting is 5m long by 3m high. Does he have enough paint? Explain your answer?

12. Ellie is tiling her bathroom. She has 20 square metres of tiles. The space he is tiling is 5 tiles wide. How many tiles tall does the space have to be in order for him to use all of his tiles?
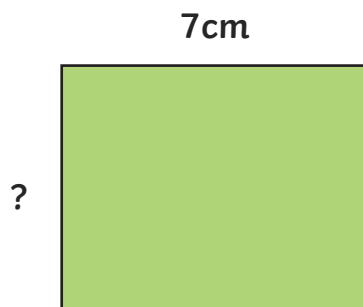
13. Erica has 16 square metres of wood to replace the floors in a small room. If the room is 4 metres wide, what length is the room?

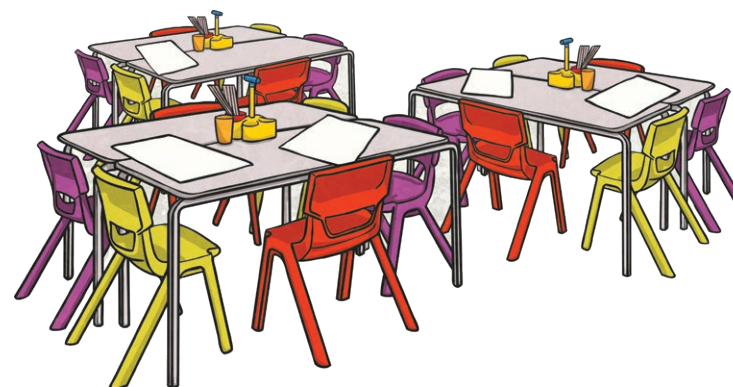14. A rectangle has an area of 42cm². If the length is 7cm, what is the width?

7cm
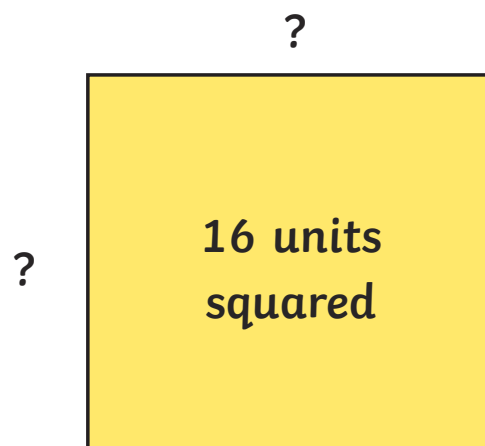
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15. A carpet square in a kindergarten classroom has an area of 4 square metres. If the width of the square is 2 metres, what is the length?

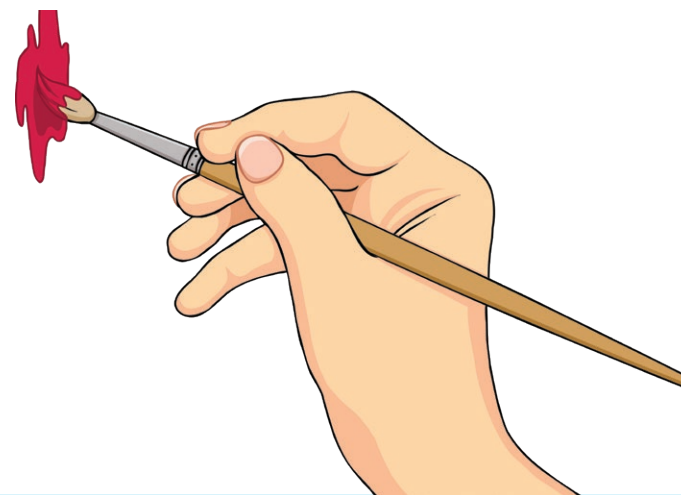16. A square tile has an area of 16 units squared. What is the length and width of the square tile?

?

?   **16 units squared**

17. Marshall is painting a canvas. He has enough paint to cover 1m^2 paint. If the canvas is 50cm long, how wide is it?

18. Becky is making a quilt with 21 squares of fabric. The length of the quilt requires 3 squares. How many squares will be used to measure the width of the quilt?
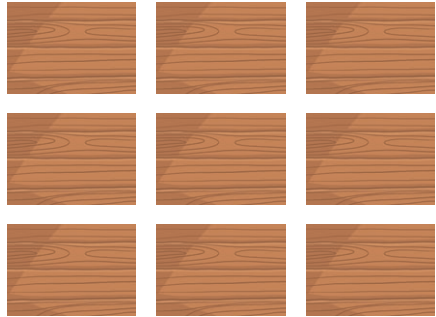
19. Hope says that she tiled a bigger wall than her brother Mark. Hope's wall was 7 metres by 4 metres. Mark used 21 square metre tiles to cover his wall. Whose wall was larger?

20. Trevor is using wood tiles that measure 1 square metre. Trevor has 36 tiles. The space Trevor is tiling measures 10 metres long and 4 metres wide. Will Trevor have enough tiles to cover his floor? Explain your answer in words, pictures or numbers?

Real Word Area Problems **Answers**

1. **3m²**

2. **12m²**

3. **6m²**

4. **2m × 2m = 4m^2 and 2m × 3m = 6m^2 so she should buy the 2m by 2m rug.**

5. **8m²**

6. **1m²**

7. **½m²**

8. **6m²**

9. **6m²**

10. **150cm²**

11. **5m × 3m = 15m² so yes.**

12. **4 tiles**

13. **5 tiles**

14. **6cm.**

15. **2m.**

16. **4 × 4.**

17. **2m or 200cm.**

18. **7 squares.**

19. **Hope tiled more because 7 × 4 = 28. 28 is greater than 21.**

20. **He does not have enough tiles. 4 × 10 = 40. square metre tiles and he only has 36.**