

Area of Rectangles and Squares

Name: _____ Date: _____ Score: _____ / 24

Q Quick Review

The **area** of a shape is the amount of flat space it covers, measured in **square units**. For a **rectangle**, area equals **length times width**: $A = l \times w$. A **square** is just a rectangle whose sides are all equal, so its area is **side times side**: $A = s \times s = s^2$. Always include square units in your answer, like cm^2 or ft^2 . If side lengths are decimals or fractions, multiply them the same careful way — the formula never changes.

◊ **Example:** Find the area of a rectangle with length 8 cm and width 5 cm.
 ⇒ For a rectangle, area is length times width. Here the length is 8 cm and the width is 5 cm, so multiply: $8 \times 5 = 40$. Because we multiplied centimeters by centimeters, the units become square centimeters. So the area is 40 square centimeters, written 40 cm^2 .

Answer: 40 cm^2

PRACTICE

Find the area of each rectangle or square. Include square units.

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|---|-------|---|-------|
| 1. Rectangle: $l = 8 \text{ cm}, w = 5 \text{ cm}$ | _____ | 11. Square: $s = 2.5 \text{ m}$ | _____ |
| 2. Rectangle: $l = 12 \text{ m}, w = 4 \text{ m}$ | _____ | 12. Rectangle: $l = 14 \text{ in}, w = 5 \text{ in}$ | _____ |
| 3. Square: $s = 7 \text{ in}$ | _____ | 13. Square: $s = 9 \text{ ft}$ | _____ |
| 4. Rectangle: $l = 9 \text{ ft}, w = 6 \text{ ft}$ | _____ | 14. Rectangle: $l = 7.5 \text{ cm}, w = 6 \text{ cm}$ | _____ |
| 5. Rectangle: $l = 15 \text{ cm}, w = 3 \text{ cm}$ | _____ | 15. Rectangle: $l = 18 \text{ m}, w = 3 \text{ m}$ | _____ |
| 6. Square: $s = 11 \text{ m}$ | _____ | 16. Square: $s = 12 \text{ in}$ | _____ |
| 7. Rectangle: $l = 6.5 \text{ cm}, w = 4 \text{ cm}$ | _____ | 17. Rectangle: $l = 4.2 \text{ m}, w = 5 \text{ m}$ | _____ |
| 8. Rectangle: $l = 10 \text{ in}, w = 2.5 \text{ in}$ | _____ | 18. Rectangle: $l = 16 \text{ ft}, w = 4 \text{ ft}$ | _____ |
| 9. Rectangle: $l = 13 \text{ ft}, w = 8 \text{ ft}$ | _____ | 19. Square: $s = 8.5 \text{ cm}$ | _____ |
| 10. Square: $s = 20 \text{ cm}$ | _____ | 20. Rectangle: $l = 25 \text{ m}, w = 10 \text{ m}$ | _____ |

◆ Word Problems

21. A rectangular rug is 9 feet long and 6 feet wide. What is the area of the rug? _____
22. A square garden has sides of 12 meters. How many square meters of soil are needed to cover it? _____
23. A bedroom floor is 13 feet long and 8 feet wide. What is its area? _____
24. A poster is 2.5 feet wide and 4 feet tall. What is the area of the poster? _____



Answer Keys

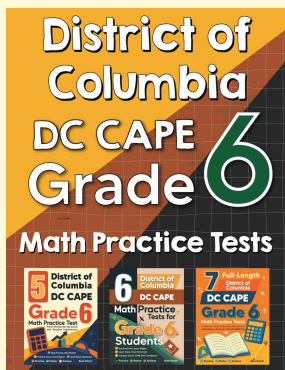
- | | |
|------------------------|--------------------------|
| 1. 40 cm^2 | 13. 81 ft^2 |
| 2. 48 m^2 | 14. 45 cm^2 |
| 3. 49 in^2 | 15. 54 m^2 |
| 4. 54 ft^2 | 16. 144 in^2 |
| 5. 45 cm^2 | 17. 21 m^2 |
| 6. 121 m^2 | 18. 64 ft^2 |
| 7. 26 cm^2 | 19. 72.25 cm^2 |
| 8. 25 in^2 | 20. 250 m^2 |
| 9. 104 ft^2 | 21. 54 ft^2 |
| 10. 400 cm^2 | 22. 144 m^2 |
| 11. 6.25 m^2 | 23. 104 ft^2 |
| 12. 70 in^2 | 24. 10 ft^2 |

Step-by-Step Explanations

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| <p>1. Area = $l \times w = 8 \times 5 = 40 \text{ cm}^2$.</p> <p>2. Area = $12 \times 4 = 48 \text{ m}^2$.</p> <p>3. Area = $s^2 = 7 \times 7 = 49 \text{ in}^2$.</p> <p>4. Area = $9 \times 6 = 54 \text{ ft}^2$.</p> <p>5. Area = $15 \times 3 = 45 \text{ cm}^2$.</p> <p>6. Area = $s^2 = 11 \times 11 = 121 \text{ m}^2$.</p> <p>7. Area = $6.5 \times 4 = 26 \text{ cm}^2$.</p> <p>8. Area = $10 \times 2.5 = 25 \text{ in}^2$.</p> <p>9. Area = $13 \times 8 = 104 \text{ ft}^2$.</p> <p>10. Area = $s^2 = 20 \times 20 = 400 \text{ cm}^2$.</p> <p>11. Area = $s^2 = 2.5 \times 2.5 = 6.25 \text{ m}^2$.</p> <p>12. Area = $14 \times 5 = 70 \text{ in}^2$.</p> | <p>13. Area = $s^2 = 9 \times 9 = 81 \text{ ft}^2$.</p> <p>14. Area = $7.5 \times 6 = 45 \text{ cm}^2$.</p> <p>15. Area = $18 \times 3 = 54 \text{ m}^2$.</p> <p>16. Area = $s^2 = 12 \times 12 = 144 \text{ in}^2$.</p> <p>17. Area = $4.2 \times 5 = 21 \text{ m}^2$.</p> <p>18. Area = $16 \times 4 = 64 \text{ ft}^2$.</p> <p>19. Area = $s^2 = 8.5 \times 8.5 = 72.25 \text{ cm}^2$.</p> <p>20. Area = $25 \times 10 = 250 \text{ m}^2$.</p> <p>21. Area = $l \times w = 9 \times 6 = 54$ square feet.</p> <p>22. Area = $s^2 = 12 \times 12 = 144$ square meters.</p> <p>23. Area = $l \times w = 13 \times 8 = 104$ square feet.</p> <p>24. Area = $l \times w = 4 \times 2.5 = 10$ square feet.</p> |
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