

Perimeter of Rectangles

Name: _____ Date: _____ Score: _____ / 24

Q Quick Review

The **perimeter** of a shape is the distance all the way around its edge — like walking around the outside of a fence. For a rectangle, the two lengths are equal and the two widths are equal, so you can add length + width + length + width. A faster way is to add the length and width once, then double it: $\text{perimeter} = 2 \times (\text{length} + \text{width})$. For example, a rectangle 5 feet long and 3 feet wide has a perimeter of $2 \times (5 + 3) = 16$ feet. Perimeter is a **length**, so it uses plain units, not square units.

◊ **Example:** A rectangle has a length of 7 meters and a width of 4 meters. What is its perimeter?
 ⇒ Perimeter is the distance all the way around the rectangle. The shortcut is to add the length and width once, then double it. First add: $7 + 4 = 11$. Then double it because there are two lengths and two widths: $2 \times 11 = 22$. Since perimeter measures a distance around, the unit is just meters — not square meters.

Answer: 22 meters

PRACTICE

Find the perimeter of each rectangle.

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|------------------------|-------|-------------------------|-------|
| 1. Length 3, width 4 | _____ | 11. Length 9, width 9 | _____ |
| 2. Length 5, width 6 | _____ | 12. Length 13, width 5 | _____ |
| 3. Length 7, width 8 | _____ | 13. Length 20, width 4 | _____ |
| 4. Length 9, width 2 | _____ | 14. Length 14, width 3 | _____ |
| 5. Length 10, width 5 | _____ | 15. Length 7, width 7 | _____ |
| 6. Length 6, width 6 | _____ | 16. Length 16, width 5 | _____ |
| 7. Length 12, width 3 | _____ | 17. Length 12, width 12 | _____ |
| 8. Length 8, width 7 | _____ | 18. Length 18, width 3 | _____ |
| 9. Length 11, width 4 | _____ | 19. Length 25, width 4 | _____ |
| 10. Length 15, width 2 | _____ | 20. Length 30, width 10 | _____ |

◆ Word Problems

21. A vegetable garden is 10 feet long and 6 feet wide. How many feet of fence are needed to go all the way around it? _____
22. A rectangular swimming pool is 25 meters long and 12 meters wide. What is the perimeter of the pool? _____
23. A square picture frame is 8 inches on each side. What is the perimeter of the frame? _____
24. Mr. Lee puts a ribbon border around a rectangular bulletin board that is 9 feet long and 5 feet wide. How much ribbon does he need? _____



Answer Keys

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|--------------|---------------|
| 1. 14 units | 13. 48 units |
| 2. 22 units | 14. 34 units |
| 3. 30 units | 15. 28 units |
| 4. 22 units | 16. 42 units |
| 5. 30 units | 17. 48 units |
| 6. 24 units | 18. 42 units |
| 7. 30 units | 19. 58 units |
| 8. 30 units | 20. 80 units |
| 9. 30 units | 21. 32 feet |
| 10. 34 units | 22. 74 meters |
| 11. 36 units | 23. 32 inches |
| 12. 36 units | 24. 28 feet |

Step-by-Step Explanations

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| <p>1. Add length and width, then double: $2 \times (3 + 4) = 14$ units.</p> <p>2. Add length and width, then double: $2 \times (5 + 6) = 22$ units.</p> <p>3. Add length and width, then double: $2 \times (7 + 8) = 30$ units.</p> <p>4. Add length and width, then double: $2 \times (9 + 2) = 22$ units.</p> <p>5. Add length and width, then double: $2 \times (10 + 5) = 30$ units.</p> <p>6. This is a square: $2 \times (6 + 6) = 24$ units.</p> <p>7. Add length and width, then double: $2 \times (12 + 3) = 30$ units.</p> <p>8. Add length and width, then double: $2 \times (8 + 7) = 30$ units.</p> <p>9. Add length and width, then double: $2 \times (11 + 4) = 30$ units.</p> <p>10. Add length and width, then double: $2 \times (15 + 2) = 34$ units.</p> <p>11. This is a square: $2 \times (9 + 9) = 36$ units.</p> <p>12. Add length and width, then double: $2 \times (13 + 5) = 36$ units.</p> <p>13. Add length and width, then double: $2 \times (20 + 4) = 48$ units.</p> <p>14. Add length and width, then double: $2 \times (14 + 3) = 34$ units.</p> | <p>15. This is a square: $2 \times (7 + 7) = 28$ units.</p> <p>16. Add length and width, then double: $2 \times (16 + 5) = 42$ units.</p> <p>17. This is a square: $2 \times (12 + 12) = 48$ units.</p> <p>18. Add length and width, then double: $2 \times (18 + 3) = 42$ units.</p> <p>19. Add length and width, then double: $2 \times (25 + 4) = 58$ units.</p> <p>20. Add length and width, then double: $2 \times (30 + 10) = 80$ units.</p> <p>21. Perimeter is the distance around: $2 \times (10 + 6) = 2 \times 16 = 32$. You need 32 feet of fence.</p> <p>22. Add length and width, then double: $2 \times (25 + 12) = 2 \times 37 = 74$. The perimeter is 74 meters.</p> <p>23. A square has four equal sides, so $4 \times 8 = 32$, or $2 \times (8 + 8) = 32$. The perimeter is 32 inches.</p> <p>24. The ribbon goes around the edge, so find the perimeter: $2 \times (9 + 5) = 2 \times 14 = 28$. He needs 28 feet of ribbon.</p> |
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