

# Finding the Unit Rate

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Score: \_\_\_\_\_ / 24

## Q Quick Review

A **unit rate** tells you the amount for *exactly one* of something — one hour, one pound, one ticket. To find a unit rate, **divide the first quantity by the second**. For “120 miles in 3 hours,” divide  $120 \div 3 = 40$ , so the unit rate is 40 miles per hour. Unit rates make it easy to **compare deals**: if one pack costs \$0.50 per pencil and another costs \$0.40 per pencil, the second is the better buy. A unit rate always has a 1 in the denominator.

◇ **Example:** A store sells 4 pounds of apples for \$12. Find the unit price.  
 ⇒ A unit price is the cost for just *one* pound. To find it, we divide the total cost by the number of pounds:  $\$12 \div 4$  pounds. That gives \$3 per pound. Here is a helpful check: if one pound is \$3, then 4 pounds would be  $4 \times \$3 = \$12$ , which matches. So the unit price is \$3 per pound.

**Answer:** \$3 per pound

## PRACTICE

Find each unit rate.

- |                              |       |                                 |       |
|------------------------------|-------|---------------------------------|-------|
| 1. 120 miles in 3 hours      | _____ | 11. 144 cookies in 12 trays     | _____ |
| 2. \$12 for 4 pounds         | _____ | 12. \$56 for 8 pounds           | _____ |
| 3. 150 words in 5 minutes    | _____ | 13. 270 miles in 6 hours        | _____ |
| 4. 240 kilometers in 4 hours | _____ | 14. 132 liters in 11 minutes    | _____ |
| 5. 96 ounces in 8 cups       | _____ | 15. \$63 for 7 shirts           | _____ |
| 6. 350 miles on 7 gallons    | _____ | 16. 200 steps in 4 minutes      | _____ |
| 7. 18 dollars for 3 hours    | _____ | 17. 168 miles in 8 hours        | _____ |
| 8. 100 meters in 8 seconds   | _____ | 18. \$90 for 12 sandwiches      | _____ |
| 9. \$45 for 9 tickets        | _____ | 19. 315 apples in 9 crates      | _____ |
| 10. 84 pages in 6 hours      | _____ | 20. 216 heartbeats in 3 minutes | _____ |

### ◆ Word Problems

21. A 6-pack of juice boxes costs \$5.40. What is the cost per juice box? \_\_\_\_\_
22. Maya runs 12 miles in 2 hours. At this rate, how many miles does she run per hour? \_\_\_\_\_
23. Brand A sells 8 markers for \$4.00, and Brand B sells 5 markers for \$3.00. Which brand has the lower unit price? \_\_\_\_\_
24. A landscaping crew plants 96 flowers in 8 garden beds, sharing them equally. How many flowers go in each bed? \_\_\_\_\_



## Answer Keys

- |   |  |
|---|--|
| <p>1. 40 mi/h</p> <p>2. \$3 per pound</p> <p>3. 30 words/min</p> <p>4. 60 km/h</p> <p>5. 12 oz/cup</p> <p>6. 50 mi/gal</p> <p>7. \$6 per hour</p> <p>8. 12.5 m/s</p> <p>9. \$5 per ticket</p> <p>10. 14 pages/h</p> <p>11. 12 cookies/tray</p> <p>12. \$7 per pound</p> | <p>13. 45 mi/h</p> <p>14. 12 L/min</p> <p>15. \$9 per shirt</p> <p>16. 50 steps/min</p> <p>17. 21 mi/h</p> <p>18. \$7.50 per sandwich</p> <p>19. 35 apples/crate</p> <p>20. 72 beats/min</p> <p>21. \$0.90 per juice box</p> <p>22. 6 miles per hour</p> <p>23. Brand A (\$0.50 vs. \$0.60 per marker)</p> <p>24. 12 flowers per bed</p> |
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### Step-by-Step Explanations

- |   |  |
|---|--|
| <p>1. Divide <math>120 \div 3 = 40</math> miles per hour.</p> <p>2. Divide <math>12 \div 4 = 3</math> dollars per pound.</p> <p>3. Divide <math>150 \div 5 = 30</math> words per minute.</p> <p>4. Divide <math>240 \div 4 = 60</math> kilometers per hour.</p> <p>5. Divide <math>96 \div 8 = 12</math> ounces per cup.</p> <p>6. Divide <math>350 \div 7 = 50</math> miles per gallon.</p> <p>7. Divide <math>18 \div 3 = 6</math> dollars per hour.</p> <p>8. Divide <math>100 \div 8 = 12.5</math> meters per second.</p> <p>9. Divide <math>45 \div 9 = 5</math> dollars per ticket.</p> <p>10. Divide <math>84 \div 6 = 14</math> pages per hour.</p> <p>11. Divide <math>144 \div 12 = 12</math> cookies per tray.</p> <p>12. Divide <math>56 \div 8 = 7</math> dollars per pound.</p> | <p>13. Divide <math>270 \div 6 = 45</math> miles per hour.</p> <p>14. Divide <math>132 \div 11 = 12</math> liters per minute.</p> <p>15. Divide <math>63 \div 7 = 9</math> dollars per shirt.</p> <p>16. Divide <math>200 \div 4 = 50</math> steps per minute.</p> <p>17. Divide <math>168 \div 8 = 21</math> miles per hour.</p> <p>18. Divide <math>90 \div 12 = 7.5</math>, so \$7.50 per sandwich.</p> <p>19. Divide <math>315 \div 9 = 35</math> apples per crate.</p> <p>20. Divide <math>216 \div 3 = 72</math> beats per minute.</p> <p>21. Divide the total by the number of boxes: <math>\\$5.40 \div 6 = \\$0.90</math> per juice box.</p> <p>22. Divide miles by hours: <math>12 \div 2 = 6</math>. Maya runs 6 miles each hour.</p> <p>23. Brand A: <math>\\$4.00 \div 8 = \\$0.50</math> per marker. Brand B: <math>\\$3.00 \div 5 = \\$0.60</math> per marker. Brand A is cheaper per marker.</p> <p>24. Divide flowers by beds: <math>96 \div 8 = 12</math>. Each bed gets 12 flowers.</p> |
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