

# Interpreting Remainders

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 24

## Q Quick Review

When you divide and the numbers do not split evenly, you get a **remainder** — the amount left over. For example,  $17 \div 5 = 3 \text{ R } 2$ , because 5 goes into 17 three times with 2 left over. The tricky part is knowing what the remainder **means** in a real problem. Sometimes you **drop** the remainder, sometimes you **round up** to the next whole number, and sometimes the remainder **is** the answer. Always reread the question and ask what the leftover amount stands for.

◇ **Example:** 23 students are riding in vans. Each van holds 4 students. How many vans are needed so everyone has a ride?  
 ⇒ First do the division:  $23 \div 4 = 5 \text{ R } 3$ . Five full vans carry 20 students, but 3 students still need a ride. We cannot leave them behind, so we round up and add one more van. That gives  $5 + 1 = 6$  vans. Here the remainder tells us to round up.

**Answer:** 6 vans

## PRACTICE

Divide and write the remainder. Think about what it means.

- |                 |       |                  |       |
|-----------------|-------|------------------|-------|
| 1. $17 \div 5$  | _____ | 11. $19 \div 2$  | _____ |
| 2. $23 \div 4$  | _____ | 12. $47 \div 5$  | _____ |
| 3. $38 \div 6$  | _____ | 13. $70 \div 8$  | _____ |
| 4. $50 \div 7$  | _____ | 14. $26 \div 3$  | _____ |
| 5. $29 \div 3$  | _____ | 15. $58 \div 7$  | _____ |
| 6. $44 \div 8$  | _____ | 16. $91 \div 9$  | _____ |
| 7. $61 \div 9$  | _____ | 17. $100 \div 6$ | _____ |
| 8. $75 \div 10$ | _____ | 18. $85 \div 4$  | _____ |
| 9. $33 \div 4$  | _____ | 19. $64 \div 5$  | _____ |
| 10. $52 \div 6$ | _____ | 20. $77 \div 6$  | _____ |

## ◆ Word Problems

21. There are 30 students going on a field trip. Each van can carry 7 students. How many vans are needed so that everyone gets a ride? \_\_\_\_\_
22. Mrs. Lee baked 53 cookies. She puts exactly 8 cookies in each bag for the bake sale. How many full bags can she make? \_\_\_\_\_
23. Diego has 100 vacation photos. He can fit 6 photos on each scrapbook page. How many pages will he need to hold all of the photos? \_\_\_\_\_
24. A teacher shares 45 markers equally among 4 art stations. Each station gets the same number, and any extras go back in the supply box. How many markers go in the supply box? \_\_\_\_\_



## Answer Keys

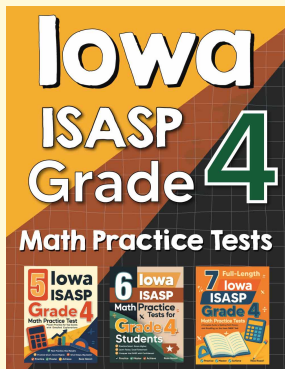
- |   |   |
|---|---|
| 1. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">3 R 2</span>  | 13. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">8 R 6</span>       |
| 2. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">5 R 3</span>  | 14. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">8 R 2</span>       |
| 3. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">6 R 2</span>  | 15. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">8 R 2</span>       |
| 4. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">7 R 1</span>  | 16. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">10 R 1</span>      |
| 5. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">9 R 2</span>  | 17. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">16 R 4</span>      |
| 6. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">5 R 4</span>  | 18. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">21 R 1</span>      |
| 7. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">6 R 7</span>  | 19. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">12 R 4</span>      |
| 8. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">7 R 5</span>  | 20. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">12 R 5</span>      |
| 9. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">8 R 1</span>  | 21. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">5 vans</span>      |
| 10. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">8 R 4</span> | 22. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">6 full bags</span> |
| 11. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">9 R 1</span> | 23. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">17 pages</span>    |
| 12. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">9 R 2</span> | 24. <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">1 marker</span>    |

### Step-by-Step Explanations

- |   |  |
|---|--|
| <p>1. <math>5 \times 3 = 15</math>, and <math>17 - 15 = 2</math> left over.</p> <p>2. <math>4 \times 5 = 20</math>, and <math>23 - 20 = 3</math> left over.</p> <p>3. <math>6 \times 6 = 36</math>, and <math>38 - 36 = 2</math> left over.</p> <p>4. <math>7 \times 7 = 49</math>, and <math>50 - 49 = 1</math> left over.</p> <p>5. <math>3 \times 9 = 27</math>, and <math>29 - 27 = 2</math> left over.</p> <p>6. <math>8 \times 5 = 40</math>, and <math>44 - 40 = 4</math> left over.</p> <p>7. <math>9 \times 6 = 54</math>, and <math>61 - 54 = 7</math> left over.</p> <p>8. <math>10 \times 7 = 70</math>, and <math>75 - 70 = 5</math> left over.</p> <p>9. <math>4 \times 8 = 32</math>, and <math>33 - 32 = 1</math> left over.</p> <p>10. <math>6 \times 8 = 48</math>, and <math>52 - 48 = 4</math> left over.</p> <p>11. <math>2 \times 9 = 18</math>, and <math>19 - 18 = 1</math> left over.</p> <p>12. <math>5 \times 9 = 45</math>, and <math>47 - 45 = 2</math> left over.</p> <p>13. <math>8 \times 8 = 64</math>, and <math>70 - 64 = 6</math> left over.</p> <p>14. <math>3 \times 8 = 24</math>, and <math>26 - 24 = 2</math> left over.</p> | <p>15. <math>7 \times 8 = 56</math>, and <math>58 - 56 = 2</math> left over.</p> <p>16. <math>9 \times 10 = 90</math>, and <math>91 - 90 = 1</math> left over.</p> <p>17. <math>6 \times 16 = 96</math>, and <math>100 - 96 = 4</math> left over.</p> <p>18. <math>4 \times 21 = 84</math>, and <math>85 - 84 = 1</math> left over.</p> <p>19. <math>5 \times 12 = 60</math>, and <math>64 - 60 = 4</math> left over.</p> <p>20. <math>6 \times 12 = 72</math>, and <math>77 - 72 = 5</math> left over.</p> <p>21. <math>30 \div 7 = 4 \text{ R } 2</math>. Four vans carry 28, but 2 students are still waiting, so we round up to 5 vans.</p> <p>22. <math>53 \div 8 = 6 \text{ R } 5</math>. She can fill 6 bags completely. The 5 leftover cookies are not enough for a full bag, so we drop the remainder.</p> <p>23. <math>100 \div 6 = 16 \text{ R } 4</math>. Sixteen pages hold 96 photos, and 4 are left, so he needs one more page: <math>16 + 1 = 17</math> pages.</p> <p>24. <math>45 \div 4 = 11 \text{ R } 1</math>. Each station gets 11 markers, and the remainder of 1 marker goes back in the supply box. Here the remainder is the answer.</p> |
|---|--|



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