

# Multiplying Two Two-Digit Numbers

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

## Q Quick Review

To multiply two two-digit numbers, break the bottom number into its **ones** and **tens**. First multiply the top number by the ones digit. Then multiply the top number by the tens digit — and because that digit really means tens, write its product one place to the left (or put a 0 in the ones spot). Finally, **add** the two partial products together. For example,  $42 \times 18$  is  $(42 \times 8) + (42 \times 10)$ . Estimating with rounded numbers helps you check your work.

◇ **Example:** Find  $42 \times 18$ .

⇒ Split 18 into 8 ones and 1 ten. First multiply by the ones:  $42 \times 8 = 336$ . Next multiply by the tens:  $42 \times 1 = 42$ , but that 1 is really 10, so the partial product is 420. Now add the two partial products:  $336 + 420 = 756$ . Check by estimating:  $40 \times 20 = 800$ , which is close to 756 — great!

**Answer:** 756

## PRACTICE

Multiply. Find each partial product, then add them.

- |                    |       |                    |       |
|--------------------|-------|--------------------|-------|
| 1. $12 \times 14$  | _____ | 11. $28 \times 45$ | _____ |
| 2. $23 \times 15$  | _____ | 12. $37 \times 52$ | _____ |
| 3. $31 \times 22$  | _____ | 13. $48 \times 26$ | _____ |
| 4. $42 \times 18$  | _____ | 14. $56 \times 38$ | _____ |
| 5. $25 \times 36$  | _____ | 15. $64 \times 29$ | _____ |
| 6. $34 \times 27$  | _____ | 16. $73 \times 41$ | _____ |
| 7. $46 \times 23$  | _____ | 17. $85 \times 17$ | _____ |
| 8. $53 \times 19$  | _____ | 18. $92 \times 34$ | _____ |
| 9. $62 \times 24$  | _____ | 19. $58 \times 47$ | _____ |
| 10. $71 \times 33$ | _____ | 20. $67 \times 53$ | _____ |

## ◆ Word Problems

- A classroom has 24 rows of chairs with 16 chairs in each row. How many chairs are in the classroom? \_\_\_\_\_
- A garden has 35 rows of tomato plants with 28 plants in each row. How many tomato plants are there? \_\_\_\_\_
- A store sells packs of stickers. Each pack has 48 stickers, and the store sells 52 packs. How many stickers is that? \_\_\_\_\_
- A school collects 75 cans of food from each of its 36 classrooms. How many cans does the school collect in all? \_\_\_\_\_



## Answer Keys

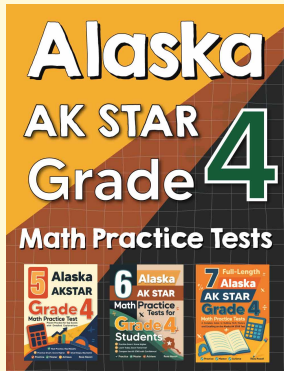
- |           |                    |
|-----------|--------------------|
| 1. 168    | 13. 1,248          |
| 2. 345    | 14. 2,128          |
| 3. 682    | 15. 1,856          |
| 4. 756    | 16. 2,993          |
| 5. 900    | 17. 1,445          |
| 6. 918    | 18. 3,128          |
| 7. 1,058  | 19. 2,726          |
| 8. 1,007  | 20. 3,551          |
| 9. 1,488  | 21. 384 chairs     |
| 10. 2,343 | 22. 980 plants     |
| 11. 1,260 | 23. 2,496 stickers |
| 12. 1,924 | 24. 2,700 cans     |

### Step-by-Step Explanations

- |  |  |
|--|--|
| <p>1. <math>12 \times 4 = 48</math> and <math>12 \times 10 = 120</math>. Add: <math>48 + 120 = 168</math>.</p> <p>2. <math>23 \times 5 = 115</math> and <math>23 \times 10 = 230</math>. Add: <math>115 + 230 = 345</math>.</p> <p>3. <math>31 \times 2 = 62</math> and <math>31 \times 20 = 620</math>. Add: <math>62 + 620 = 682</math>.</p> <p>4. <math>42 \times 8 = 336</math> and <math>42 \times 10 = 420</math>. Add: <math>336 + 420 = 756</math>.</p> <p>5. <math>25 \times 6 = 150</math> and <math>25 \times 30 = 750</math>. Add: <math>150 + 750 = 900</math>.</p> <p>6. <math>34 \times 7 = 238</math> and <math>34 \times 20 = 680</math>. Add: <math>238 + 680 = 918</math>.</p> <p>7. <math>46 \times 3 = 138</math> and <math>46 \times 20 = 920</math>. Add: <math>138 + 920 = 1,058</math>.</p> <p>8. <math>53 \times 9 = 477</math> and <math>53 \times 10 = 530</math>. Add: <math>477 + 530 = 1,007</math>.</p> <p>9. <math>62 \times 4 = 248</math> and <math>62 \times 20 = 1,240</math>. Add: <math>248 + 1,240 = 1,488</math>.</p> <p>10. <math>71 \times 3 = 213</math> and <math>71 \times 30 = 2,130</math>. Add: <math>213 + 2,130 = 2,343</math>.</p> <p>11. <math>28 \times 5 = 140</math> and <math>28 \times 40 = 1,120</math>. Add: <math>140 + 1,120 = 1,260</math>.</p> <p>12. <math>37 \times 2 = 74</math> and <math>37 \times 50 = 1,850</math>. Add: <math>74 + 1,850 = 1,924</math>.</p> | <p>13. <math>48 \times 6 = 288</math> and <math>48 \times 20 = 960</math>. Add: <math>288 + 960 = 1,248</math>.</p> <p>14. <math>56 \times 8 = 448</math> and <math>56 \times 30 = 1,680</math>. Add: <math>448 + 1,680 = 2,128</math>.</p> <p>15. <math>64 \times 9 = 576</math> and <math>64 \times 20 = 1,280</math>. Add: <math>576 + 1,280 = 1,856</math>.</p> <p>16. <math>73 \times 1 = 73</math> and <math>73 \times 40 = 2,920</math>. Add: <math>73 + 2,920 = 2,993</math>.</p> <p>17. <math>85 \times 7 = 595</math> and <math>85 \times 10 = 850</math>. Add: <math>595 + 850 = 1,445</math>.</p> <p>18. <math>92 \times 4 = 368</math> and <math>92 \times 30 = 2,760</math>. Add: <math>368 + 2,760 = 3,128</math>.</p> <p>19. <math>58 \times 7 = 406</math> and <math>58 \times 40 = 2,320</math>. Add: <math>406 + 2,320 = 2,726</math>.</p> <p>20. <math>67 \times 3 = 201</math> and <math>67 \times 50 = 3,350</math>. Add: <math>201 + 3,350 = 3,551</math>.</p> <p>21. Multiply rows by chairs per row: <math>24 \times 16 = 384</math> chairs.</p> <p>22. Multiply rows by plants per row: <math>35 \times 28 = 980</math> plants.</p> <p>23. Multiply stickers per pack by packs sold: <math>48 \times 52 = 2,496</math> stickers.</p> <p>24. Multiply cans per classroom by classrooms: <math>75 \times 36 = 2,700</math> cans.</p> |
|--|--|



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