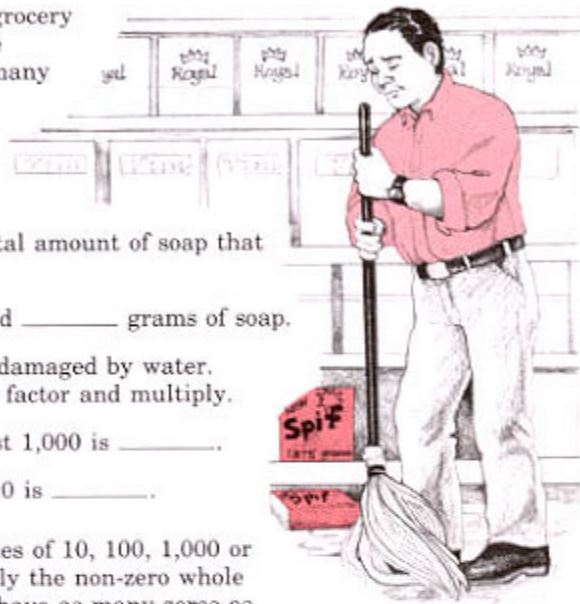


## Estimating Products

A water pipe broke in Simon's grocery store, and 23 boxes of soap were completely soaked. About how many grams of soap were ruined?

**10** SOAPS



We want to estimate the total amount of soap that was ruined.

We know each box contained \_\_\_\_\_ grams of soap.

There were \_\_\_\_\_ boxes damaged by water. To estimate, we round each factor and multiply.

1,875 rounded to the nearest 1,000 is \_\_\_\_\_.

23 rounded to the nearest 10 is \_\_\_\_\_.

✓ To multiply two multiples of 10, 100, 1,000 or 10,000, we mentally multiply the non-zero whole numbers. The product will have as many zeros as there are in both factors together.

$$2 \times 2 = 4$$

$$2,000 \times 20 = 40,000$$

$$3 \text{ zeros} + 1 \text{ zero} = 4 \text{ zeros}$$

✓ In multiplication, we round each factor to its greatest place value. In  $756 \times 24$ , we estimate 800 times 20.

About \_\_\_\_\_ grams of soap were ruined.



### Getting Started

Multiply. Use mental math.

1.  $8,000 \times 200 =$  \_\_\_\_\_

2.  $40 \times 10,000 =$  \_\_\_\_\_

3.  $6,000 \times 3,000 =$  \_\_\_\_\_

4.  $500 \times 3,000 =$  \_\_\_\_\_

Round the factors and estimate the products.

5.  $9 \times 63$

6.  $38 \times 72$

7.  $43 \times 165$

8.  $425 \times 688$

9.  $1,526 \times 65$

10.  $4,321 \times 788$

**Practice**

Multiply. Use mental math.

- |                                 |                                |
|---------------------------------|--------------------------------|
| 1. $500 \times 30 =$ _____      | 2. $70 \times 800 =$ _____     |
| 3. $3,000 \times 80 =$ _____    | 4. $60 \times 6,000 =$ _____   |
| 5. $10,000 \times 50 =$ _____   | 6. $900 \times 7,000 =$ _____  |
| 7. $4,000 \times 2,000 =$ _____ | 8. $9,000 \times 800 =$ _____  |
| 9. $50 \times 90 =$ _____       | 10. $300 \times 3,000 =$ _____ |
| 11. $400 \times 200 =$ _____    | 12. $500 \times 6,000 =$ _____ |



Round the factors and estimate the products.

- |                        |                        |                          |
|------------------------|------------------------|--------------------------|
| 13. $56 \times 43$     | 14. $67 \times 16$     | 15. $9 \times 439$       |
| 16. $237 \times 15$    | 17. $623 \times 32$    | 18. $87 \times 482$      |
| 19. $128 \times 256$   | 20. $389 \times 721$   | 21. $796 \times 593$     |
| 22. $3,258 \times 6$   | 23. $2,847 \times 9$   | 24. $43 \times 3,159$    |
| 25. $8,225 \times 33$  | 26. $6,215 \times 215$ | 27. $387 \times 465$     |
| 28. $7,096 \times 583$ | 29. $289 \times 5,653$ | 30. $7,850 \times 68$    |
| 31. $175 \times 8$     | 32. $785 \times 302$   | 33. $9 \times 5,276$     |
| 34. $57 \times 48$     | 35. $4,796 \times 78$  | 36. $3,475 \times 2,758$ |

**Apply**

Solve these problems.

37. The Speedy Bike Company orders bolts in barrels that hold 4,260 bolts each. About how many bolts will they receive if they order 9 barrels?

38. A TV center is charged \$589 for each television it stocks. It has 53 sets in stock to sell. About how much did the store pay for its current TV inventory?

