Estimating and Dividing with Greater Numbers

Find 8,037 ÷ 77.

You can use a calculator to divide large numbers.

Step 1: Estimate. Round the divisor and the dividend.
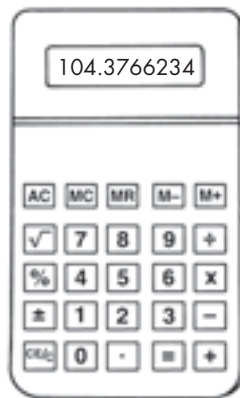
8,037 ÷ 77 ⟶
8,000 ÷ 80 = 100

The quotient should be close to 100.

Step 2: Now, use a calculator to find the quotient.

8,037 ÷ 77

| 104.3766234 |

Step 3: Round the quotient to the required place. Remember, if the digit is 5 or more, add 1 to the rounding digit. If the digit is less than 5, leave the rounding digit alone.

Round the quotient to the nearest hundredth. 104.3766234 rounded to the nearest hundredth is 104.38. This is close to the original estimate, so the answer is reasonable.

Estimate first. Then use a calculator to find the quotient. Round to the nearest hundredth if necessary.

1. 78)3,796

2. 51)2,588

3. 38)3,914

4. 37)7,492

5. 46)6,725

6. 62)9,911

7. Is 5,309 ÷ 26 less than 20, greater than 20 but less than 200, or greater than 200?

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Estimate first. Then use a calculator to find the quotient. Round to the nearest hundredth if necessary.

1. $53\overline{)6{,}324}$ **2.** $52\overline{)6{,}348}$ **3.** $86\overline{)31{,}309}$ **4.** $33\overline{)3{,}455}$

5. $17{,}496 \div 91 =$ _____   **6.** $25{,}214 \div 47 =$ _____

7. $2{,}312 \div 26 =$ _____   **8.** $4{,}895 \div 83 =$ _____

The Humphrey family decided to fly from San Francisco to New York City, and from there to Rome, New Delhi, and finally Tokyo.

9. It took the Humphrey family 6 hours to travel from San Francisco to New York. How many kilometers did they travel per hour?

Distances by Plane	
San Francisco to New York	4,140 km
New York to Rome	6,907 km
Rome to New Delhi	5,929 km
New Delhi to Tokyo	5,857 km

10. During the flight from New Delhi to Tokyo, flight attendants came through with snacks every 600 km. How many times did they come through?

11. When the family arrived in New Delhi from Rome, the youngest son asked the pilot how fast he was flying the plane. The pilot told him about 847 km per hour. How many hours did it take the family to fly from Rome to New Delhi?

A 5 h   **B** 6 h   **C** 7 h   **D** 8 h

12. Write a word problem that would require you to use $5{,}621 \div 23$.