



## SKILL 31: Dividing by a 2-Digit Divisor with Zero in the Quotient

These examples show zeros in quotients.

### Example 1

**Divide:**  $7,005 \div 25$ .

Estimate the quotient:  $6,000 \div 20 = 300$ .

$$\begin{array}{r}
 280 \text{ R}5 \\
 25 \overline{)7,005} \\
 \underline{-50} \phantom{00} \\
 200 \phantom{00} \\
 \underline{-200} \phantom{00} \\
 05 \phantom{00} \quad \text{There are zero 25s in 5.} \\
 \underline{-0} \phantom{00} \\
 5
 \end{array}$$

Since the quotient is close to the estimate, 300, it is reasonable.

### Example 2

**Divide:**  $3,312 \div 16$ .

Estimate the quotient:  $3,000 \div 15 = 200$ .

$$\begin{array}{r}
 207 \\
 16 \overline{)3,312} \\
 \underline{-32} \phantom{00} \\
 11 \phantom{00} \quad \text{There are zero 16s in 11.} \\
 \underline{-0} \phantom{00} \\
 112 \\
 \underline{-112} \\
 0
 \end{array}$$

Since the quotient is close to the estimate, 200, it is reasonable.

### Guided Practice

**Divide.**

$$\begin{array}{r}
 1 \square\square \text{ R} \square\square \\
 1. \quad 33 \overline{)3,521} \\
 \underline{-33} \phantom{00} \\
 \square\square\square \\
 \underline{-\square\square\square} \\
 \square\square
 \end{array}$$

$$\begin{array}{r}
 1 \square\square \text{ R} \square\square \\
 2. \quad 63 \overline{)6,844} \\
 \underline{-63} \phantom{00} \\
 5\square\square \\
 \underline{-\square\square\square} \\
 \square\square
 \end{array}$$

$$\begin{array}{r}
 \square\square\square \text{ R} \square\square \\
 3. \quad 34 \overline{)9,890} \\
 \underline{-\square\square} \phantom{00} \\
 309 \\
 \underline{-\square\square\square} \\
 30 \\
 \underline{-\square} \\
 \square\square
 \end{array}$$

$$4. \quad 56 \overline{)6,000}$$

$$5. \quad 63 \overline{)9,462}$$

$$6. \quad 37 \overline{)3,355}$$

# **SKILL 31: Practice**

**Divide. Check your answer.**

1.  $18 \overline{)735}$

2.  $48 \overline{)9,888}$

3.  $15 \overline{)1,063}$

4.  $36 \overline{)9,720}$

5.  $22 \overline{)4,565}$

6.  $82 \overline{)9,844}$

7.  $25 \overline{)7,642}$

8.  $63 \overline{)6,917}$

9.  $46 \overline{)9,649}$

10.  $92 \overline{)10,120}$

11.  $75 \overline{)17,313}$

12.  $44 \overline{)26,547}$

13.  $82 \overline{)4,932}$

14.  $29 \overline{)8,914}$

15.  $54 \overline{)3,805}$

16.  $18 \overline{)9,377}$

**Solve.**

17. It takes Alan's fax machine 18 seconds to fax one page.  
How many pages can the machine fax in 360 seconds? \_\_\_\_\_

18. The 3,456 students at Main Junior High traveled on buses  
to a school picnic. There were 32 students in each bus.  
How many buses were needed? \_\_\_\_\_



19. It took 38 hours to install a pump.  
The total cost of the installation  
was \$4,142. What was the  
installation cost per hour?

*Skill 31*

**A** 104

**C** 109

**B** 140

**D** 190

20. Alison makes necklaces that  
use 60 beads each. How many  
complete necklaces can she  
make with 849 beads?

*Skill 28*

**F** 13 R8

**H** 14 R9

**G** 14

**J** 15