Divide by 2 – Digit Divisors

Divide. $5{,}603 \div 30 = n$

STEP 1:
Decide where to place the first digit
in the quotient. Are there enough
thousands? NO; 5 < 30. Are there
enough hundreds? YES; 56 > 30.

$$30\overline{)5{,}603}$$

The first digit goes in the hundreds place.

STEP 2:
Divide the hundreds. $30\overline{)56}$
Write the 1 in the hundreds place.

    Multiply. 30 × 1
    Subtract. 56 – 30
    Compare. 16 < 30

$$\begin{array}{r} 1 \\ 30\overline{)5{,}603} \\ \underline{30} \\ 16 \end{array}$$

STEP 3:
Divide the tens.
Write the 5 in the tens place.

    Multiply. 30 × 5
    Subtract. 160 – 150
    Compare. 10 < 30

$$\begin{array}{r} 15 \\ 30\overline{)5{,}603} \\ \underline{30} \\ 160 \\ \underline{150} \\ 10 \end{array}$$

STEP 4:
Divide the ones. $30\overline{)103}$
Write the 3 in the ones place.

    Multiply. 30 × 3
    Subtract. 103 – 90
    Compare. 13 < 30

$$\begin{array}{r} 153 \\ 30\overline{)5{,}603} \\ \underline{30} \\ 160 \\ \underline{150} \\ 103 \\ \underline{90} \\ 13 \end{array}$$

So, $5{,}603 \div 30 = 153$ r 13

Grade 5

Bright Video Shop received a shipment of 832 video cassettes. The video cassettes were packaged in 32 cartons. Each carton held the same number of cassettes. How many video cassettes were in each carton?

STEP 1:   832 ÷ 32
Decide where to place the first digit.
Are there enough hundreds?
NO; 8 < 32.
Place the first digit in the tens place.

$$32\overline{)832}$$

STEP 2:
Divide the 83 tens.
Multiply. 32 × 2
Subtract. 83 – 64
Compare. 19 < 32

$$\begin{array}{r} 2 \\ 32\overline{)832} \\ \underline{64} \\ 19 \end{array}$$

STEP 3:
Divide the 192 ones.
Multiply 32 × 6
Subtract 192 – 192

$$\begin{array}{r} 26 \\ 32\overline{)832} \\ \underline{64} \\ 192 \\ \underline{192} \\ 0 \end{array}$$

So, each carton held 26 video cassettes.

You can use multiplication to check your answer. Multiply the divisor by the quotient. Add any remainder.
32 × 26 = 832.   The answer checks.

Examples:

A- Estimate the quotient.

1) $37\overline{)242}$ = $40\overline{)240}$ =   6

2) 158 ÷ 84   =   160 ÷ 80   =   8

Ali watches TV for 28 hours every week. How many hours does he watch per day?

28 + 7 = 4 hours per day