

3.4 Divide Decimals by 0.1, 0.01, and 0.001

Use these steps to divide a decimal by 0.1, 0.01, and 0.001:

1. Count the number of decimal places in the divisor.
2. Move the decimal point to the right one place in the dividend for each decimal place in the divisor.
(Write zeros in the quotient as needed.)

Example: Find the quotients. Use the patterns.

$$1.) \quad 16 \div 0.1 = 160$$

$$16 \div 0.01 = 1,600$$

$$16 \div 0.001 = 16,000$$

$$2.) \quad 27.6 \div 0.1 = 276$$

$$27.6 \div 0.01 = 2,760$$

$$27.6 \div 0.001 = 27,600$$

Example: Find the quotients. Use the patterns.

3.) $237 \div 0.1$

$$\boxed{2,370}$$

4.) $42.23 \div 0.1$

$$\boxed{422.3}$$

5.) $82.06 \div 0.01$

$$\boxed{8,206}$$

6.) $25 \div 0.001$

$$\boxed{25,000}$$

7.) $0.72 \div 0.1$

$$\boxed{7.2}$$

8.) $188 \div 0.001$

$$\boxed{188,000}$$

Example: Compare. Write $<$, $=$, or $>$.

9.) $12.9 \div 0.01$ $<$ $12.9 \div 0.001$

$$1290 \qquad 12900$$

10.) $5.9 \div 0.01$ $<$ $59 \div 0.01$

$$590 \qquad 5900$$