

## Dividing Decimal Numbers; Square Roots with Decimals

**Ex 1.**

$12.5 \div 3$

$0.768 \div 0.6$

$16 \div -0.03$

**Ex 2.**

Write  $-17\frac{2}{11}$  as a decimal number.

## Square Roots

### Ex 3.

Evaluate the square root.

$$\sqrt{0.04}$$

$$\sqrt{0.000169}$$

In general, if you have an even number of decimal places:

1. Take square root without decimals
2. Use half as many decimal places.

Notice that  $\sqrt{9} < \sqrt{13} < \sqrt{16}$ .

So,  $3 < \sqrt{13} < 4$ .

What kind of number is  $\sqrt{13}$ ?

It turns out  $\sqrt{13} = 3.60555127546 \dots$ , where the decimal part *does not* terminate or repeat.

A number where the decimal part does not terminate or repeat is called an \_\_\_\_\_.

### Ex 4.

Evaluate the square root with a calculator to the nearest hundredth.

$$\sqrt{0.081}$$

$$\sqrt{50}$$

Often, people approximate  $\pi$  with **3.14**

### Ex 5.

The radius of the Earth is about 3963 miles at the equator. Find the circumference of the Earth at the equator (use  $\pi \approx 3.14$ ).