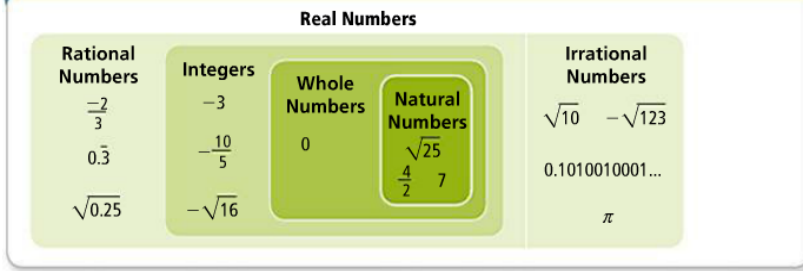
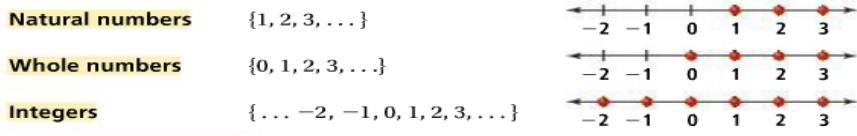


Take note

Concept Summary Real Numbers



A **rational number** is any number that you can write in the form $\frac{a}{b}$, where a and b are integers and $b \neq 0$. A rational number in decimal form is either a terminating decimal such as 5.45 or a repeating decimal such as $0.41666\dots$, which you can write as $0.41\bar{6}$. Each graph below shows a subset of the rational numbers on a number line.



An **irrational number** cannot be represented as the quotient of two integers. In decimal form, irrational numbers do not terminate or repeat. Here are some examples.

$0.1010010001\dots$ $\pi = 3.14159265\dots$

Some square roots are rational numbers and some are irrational numbers. If a whole number is not a perfect square, its square root is irrational.

Rational $\sqrt{4} = 2$ $\sqrt{25} = 5$

Irrational $\sqrt{3} = 1.73205080\dots$ $\sqrt{10} = 3.16227766\dots$

Rational numbers and irrational numbers form the set of **real numbers**.