2.1 ORDINAL NUMBERS

Ordinal numbers (such as *first*, *second*, *third*) are numbers which describe the position of something in a group or list.

Examples

- A is the *first* letter of the alphabet.
- March is the *third* month of the year.
- Her office is on the *sixth* floor.
- His birthday is on the *twenty third* of June.

The table on the right shows some ordinal numbers written as abbreviations and as words. Note that the abbreviations are formed from the relevant numeral and the last two letters of the ordinal number written as a word.

Ordinal numbers

1st	first	16th	sixteenth
2nd	second	17th	seventeenth
3rd	third	18th	eighteenth
4th	fourth	19th	nineteenth
5th	fifth	20th	twentieth
6th	sixth	21st	twenty first
7th	seventh	22nd	twenty second
8th	eighth	30th	thirtieth
9th	ninth	40th	fortieth
10th	tenth	50th	fiftieth
11th	eleventh	60th	sixtieth
12th	twelfth	70th	seventieth
13th	thirteenth	80th	eightieth
14th	fourteenth	90th	ninetieth
15th	fifteenth	100th	one hundredth

2.2 FRACTIONS

Numbers such as $\frac{1}{8}$, $\frac{1}{4}$, and $\frac{2}{3}$ are called **fractions**. A fraction is usually written in the form $\frac{a}{b}$ ("a over b"), where a and b are integers, and $b \neq 0$ ("b is not equal to zero"). The top part of the fraction is called the **numerator** and the bottom part of the fraction is called the **denominator**.

numerator → 3
denominator → 5
} "three fifths"

With the exception of $\frac{1}{4}$ ("one quarter" or "a quarter") and $\frac{1}{2}$ ("one half" or "a half"), the names of fractions are formed from the ordinal of the denominator. For example, $\frac{1}{3}$ is read as "one third", $\frac{2}{3}$ is "two thirds", $\frac{1}{8}$ is "one eighth" and $\frac{7}{8}$ is "seven eighths", and so on. In American English, $\frac{1}{4}$ is often called "one fourth".

If $a < b$ ("a is less than b"), then $\frac{a}{b} < 1$ ("a over b is less than one") and the fraction $\frac{a}{b}$ is called a **proper** fraction.

If $a > b$ ("a is greater than b"), then $\frac{a}{b} > 1$ ("a over b is greater than one") and the fraction $\frac{a}{b}$ is called an **improper** fraction.

Numbers which have a whole number part and a fraction part, such as $2\frac{1}{4}$ ("two and a quarter") or $5\frac{1}{2}$ ("five and a half"), are called **mixed** numbers (or mixed fractions).

Example 1

Write $2\frac{1}{5}$ as an improper fraction.

To *express* $2\frac{1}{5}$ as an improper fraction, we first write a new fraction with the same denominator as the fraction part of the mixed number (5).

$$2\frac{1}{5} = \frac{\quad}{5}$$

Next, we multiply the whole number part (2) by the denominator of the fraction (5) and add this product to the numerator of the fraction (1).

$$2\frac{1}{5} = \frac{(2 \times 5) + 1}{5}$$

We then *simplify* the numerator of the fraction.

$$2\frac{1}{5} = \frac{(2 \times 5) + 1}{5} = \frac{11}{5}$$