# 2.1 Decimals and Fractions

Objective: To convert fractions to decimals and decimals to fractions

Place Value

Decimal - A decimal point separates a number into two parts: the whole number and the decimal part

Millions		Hundred Thousands	Ten Thousands	Thousands		Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths
□	,	□	□	□	,	□	□	□	.	□	□	□

and
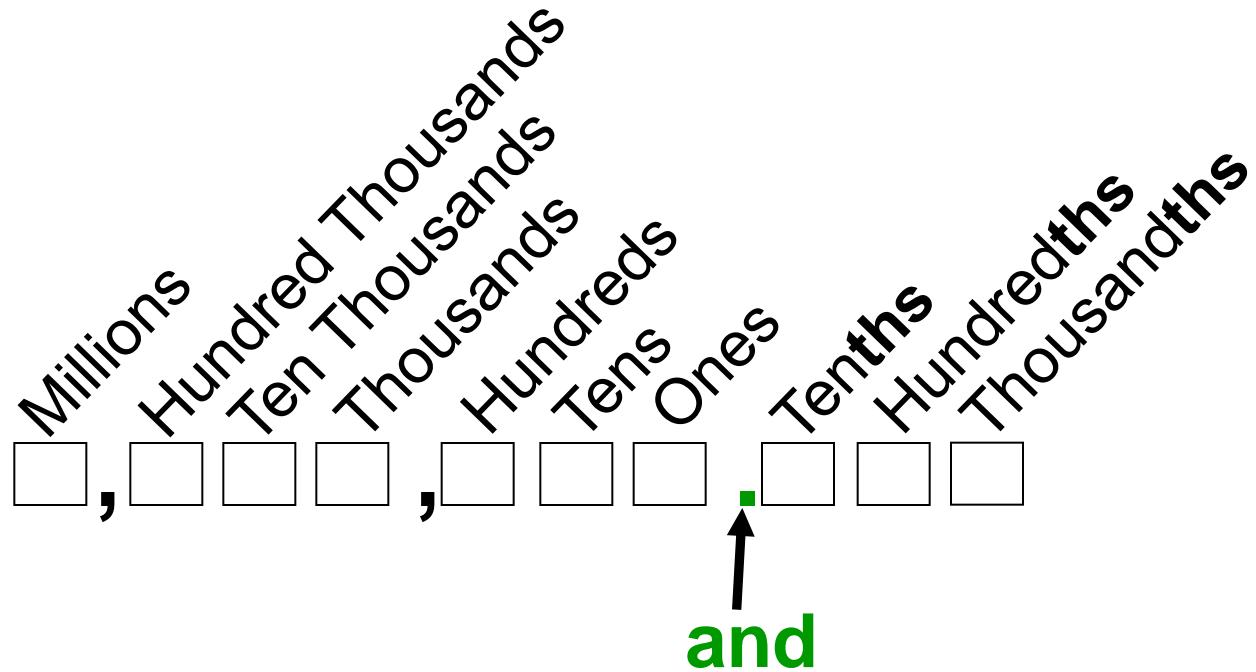
Write out each decimal.

1. 2.6   two **and** six ten**ths**

2. 5.064   five **and** sixty-four thousand**ths**

To Write a Decimal as a Fraction

Decimal	Read it correctly!!	Fraction
0.17	Seventeen hundredths	$\dfrac{17}{100}$
0.043	Forty-three thousandths	$\dfrac{43}{1000}$
0.2	Two tenths	$\dfrac{2}{10} \div 2 = \dfrac{2}{5}$
0.25	Twenty-five hundredths	$\dfrac{25}{100} \div 25 = \dfrac{1}{4}$
2.6	Two AND six tenths	$2\dfrac{6}{10} \div 2 = 2\dfrac{3}{5}$

$\dfrac{2}{10} \div 2 = \dfrac{1}{5}$

To Convert a Fraction to a Decimal

Step 1: Divide the numerator by the denominator

Example

1) $\dfrac{3}{4}$

   $= .75$

$$\begin{array}{r} 0.75 \\ 4\overline{)3.00} \\ \underline{0} \\ 30 \\ \underline{28} \\ 20 \\ \underline{20} \\ 0 \end{array}$$
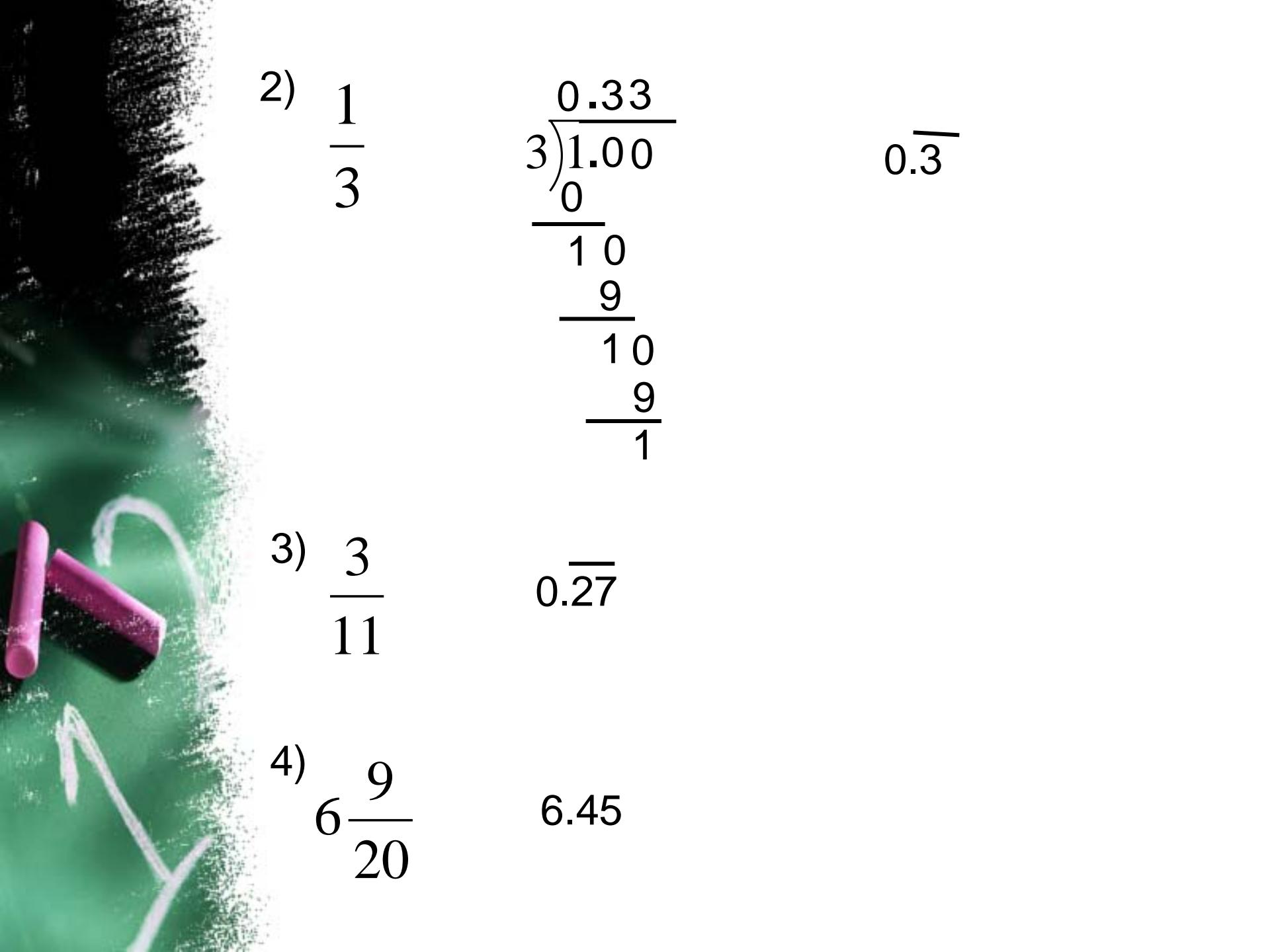
2) $\dfrac{1}{3}$

$$\begin{array}{r} 0.33 \\ 3\overline{)1.00} \\ \underline{0} \\ 1\,0 \\ \underline{9} \\ 1\,0 \\ \underline{9} \\ 1 \end{array}$$

$0.\overline{3}$

3) $\dfrac{3}{11}$

$0.\overline{27}$

4) $6\dfrac{9}{20}$

6.45