Place value again

Look at the different place values in this number 2703.94.

2	**7**	**0**	**3**	**. 9**	**4**
thou-sands	hund-reds	tens	ones	tenths	

2×1000	(thousands)
7×100	(hundreds)
0×10	
3×1	
$9 \times \frac{1}{10}$	(tenth parts *or* tenths)
$4 \times$	

What would be next place value after tenths?

_____

0.2 ... 0.3

0.18 0.19 0.20 0.21 0.22 0.23 0.24 0.25 0.26 0.27 0.28 0.29 0.30 0.31 0.32 0.33 0.34 0.35
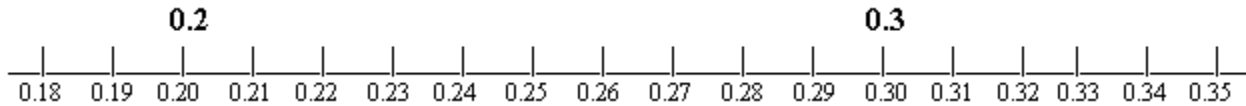
0 .	**2**	**7**
ones	tenths	hund-redths

We see from the place values that 0.27 is 2 tenths and 7 hundredths, or $\frac{2}{10}$ and $\frac{7}{100}$.

But that is two separate fractions. How can 0.27 be written as a *single* fraction??

(Based on last lesson, you should already know!) Mark 0.27 on the number line, too.

0 .	**5**	**1**
ones	tenths	hund-redths

0.51 is 5 tenths and 1 hundredth = 0.5 + 0.01.
We can also write that using fractions:

$$0.51 = \frac{5}{10} + \frac{1}{100}$$
$$= \frac{50}{100} + \frac{1}{100} = \frac{51}{100}$$

Practice

1. Break down each number into ones, tenths and hundredths. Use fractions and decimals. Then read the number.

a. 0.78 = 0.7 + 0.08 $\frac{78}{100}$ = $\frac{7}{10}$ + $\frac{8}{100}$ (seventy-eight hundredths)	b. 0.33 =	c. 0.19 =
d. 1.25 = 1 + 0.2 + 0.05	e. 3.97 =	f. 4.65 =

2. Write as a decimal or as a fraction.

	Decimal	Fraction		Decimal	Fraction		Decimal	Fraction
a.		$\frac{56}{10}$	e.	0.06		i.		$\frac{3}{100}$
b.		$2\frac{35}{100}$	f.	5.06		j.		$12\frac{20}{100}$
c.	0.47		g.	7.99		k.		$8\frac{4}{10}$
d.	1.23		h.		$5\frac{5}{100}$	l.	0.50	

3. Name the place value that has been underlined in the number.

a. 209.8<u>7</u>　　　b. 5<u>0</u>3.49　　　c. 2,938.<u>5</u>　　　d. <u>2</u>,093.40　　　e. 2,093.<u>4</u>0　　　f. 2,0<u>9</u>3.40　　　g. 2,093.4<u>0</u>

4. Write the following numbers as decimals.

a. $\frac{41}{100}$

b. $6 + \frac{80}{100}$

c. $19 + \frac{9}{100}$

d. $90 + 8 + \frac{1}{100}$

e. $\frac{71}{100}$

f. $50 + \frac{12}{100}$

g. $200 + 10 + \frac{1}{100}$

h. $7000 + 400 + 50 + 8 + \frac{37}{100}$

i. $10 + \frac{20}{100}$

j. $6000 + 40 + 4 + \frac{6}{100}$

k. $8000 + 500 + 70 + \frac{4}{10}$

l. $2000 + 2 + \frac{2}{100}$

5. Break down the following numbers. Then read the numbers in two different ways.

a. $456.14 = 400 + 50 + 6 + \frac{14}{100}$

b. 0.06

c. 44.41

d. 605.6

e. 608.06

f. 3203.00

g. 90.03

h. 708.99

i. 80.8

j. 0.55