Name: ..... Class: .....

Convert decimals between standard and expanded form using fractions

a. Write the standard decimal form of

$3 \times \frac{1}{10} + 8 \times \frac{1}{100}$

b. Write the standard decimal form of

$7 \times \frac{1}{100} + 5 \times \frac{1}{100}$

c. Write the expanded form of 0.8.

d. Write the expanded form of 7.4.

e. Write the expanded form of 12.43.

f. Write the standard decimal form of

$5 \times \frac{3}{300} + 3 \times \frac{6}{600}$

g. Write the expanded form of 2.8.

h. Write the expanded form of 1.4.

i. Write the expanded form of 2.43.

j. Write the standard decimal form of

$9 \times \frac{2}{20} + 4 \times \frac{2}{50}$

k. Write the standard decimal form of

$4 \times \frac{1}{100} + 8 \times \frac{1}{100}$

l. Write the expanded form of 0.5.

m. Write the expanded form of 3.7.

n. Write the expanded form of 25.70.

o. Write the standard decimal form of

$3 \times \frac{1}{100} + 6 \times \frac{3}{300}$

p. Write the expanded form of 1.8.

q. Write the expanded form of 1.12.

r. Write the expanded form of 3.14.

Solution

Name: ..... Class: .....

Convert decimals between standard and expanded form using fractions

a. Write the standard decimal form of

$3 \times \frac{1}{10} + 8 \times \frac{1}{100}$

Solve each expression seperately and convert to decimals.

$\left(3 \times \frac{1}{10}\right) + \left(8 \times \frac{1}{100}\right)$

$\frac{3}{10} + \frac{8}{100}$

$0.3 + 0.08$

Finally, let's add both answers.

$= 0.3 + 0.08 = 0.38$

So, $3 \times \frac{1}{10} + 8 \times \frac{1}{100} = 0.38$

b. Write the standard decimal form of

$7 \times \frac{1}{100} + 5 \times \frac{1}{100}$

Solve each expression seperately and convert to decimals.

$\left(7 \times \frac{1}{100}\right) + \left(5 \times \frac{1}{100}\right)$

$\frac{7}{100} + \frac{5}{100}$

$0.07 + 0.05$

Finally, let's add both answers.

$= 0.07 + 0.05 = 0.12$

So, $7 \times \frac{1}{100} + 5 \times \frac{1}{100} = 0.12$

c. Write the expanded form of 0.8.

To solve this, multiply the ones digit by 1, the tenth digit by $\frac{1}{10}$ and separate each place value with a plus sign.

So, $0.8 = 0 \times 1 + 8 \times \frac{1}{10}$

d. Write the expanded form of 7.4.

To solve this, multiply the ones digit by 1, the tenth digit by $\frac{1}{10}$ and separate each place value with a plus sign.

So, $7.4 = 7 \times 1 + 4 \times \frac{1}{10}$

e. Write the expanded form of 12.43.

So, $12.43 = 1 \times 10 + 2 \times 1 + 4 \times \frac{1}{10} + 3 \times \frac{1}{100}$