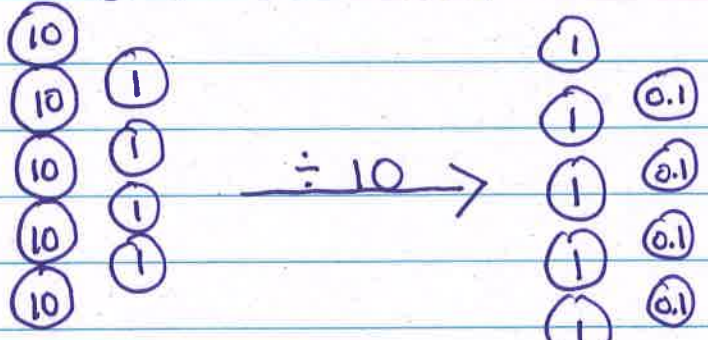
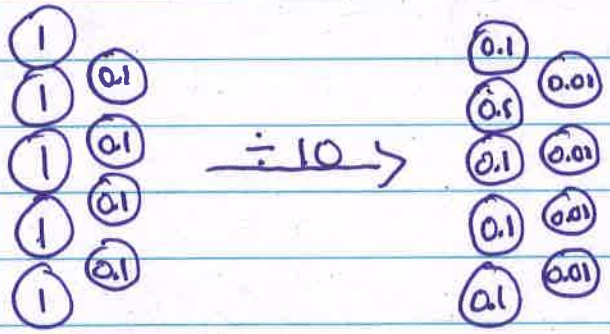
M2·L24 · Dividing Decimals in Patterns

$54 \div 10 = 5.4$



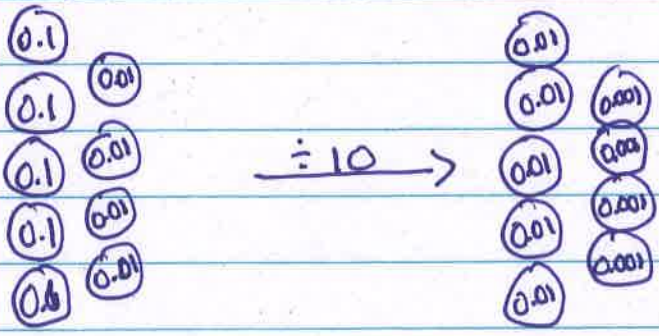
$50 + 4 = 54$ $\xrightarrow{\div 10}$ $5 + 0.4 = 5.4$

$5.4 \div 10 = 0.54$



$5 + 0.4 = 5.4$ $\qquad$ $0.5 + 0.04 = 0.54$

$0.54 \div 10 = 0.054$



$0.5 + 0.04 = 0.54$ $\xrightarrow{\div 10}$ $0.05 + 0.004 = 0.054$

$54 \xrightarrow{\div 10} 5.4 \xrightarrow{\div 10} 0.54 \xrightarrow{\div 10} 0.054$

tens	ones	tenths	hundredths	thousandths
5	4			
	5	4		
	0	5	4	
	0	0	5	4

$54 \div 90$
$= 54 \div 10 \div 9$
$= 5.4 \div 9 = 54$ tenths $\div 9$
$=$ 6 tenths $= 0.6$

$5.4 \div 90$
$5.4 \div 10 \div 9$
$0.54 \div 9 = 54$ hundredths $\div 9$
$=$ 6 hundredths $= 0.06$

$0.54 \div 90 =$
$0.54 \div 10 \div 9$
$0.054 \div 9 = 54$ thousandths $\div 9$
$=$ 6 thousandths $= 0.006$

$54 \div 900$
$54 \div 100 \div 9$
$0.54 \div 9 = 54$ hundredths $\div 9$
$=$ 6 hundredths $= 0.06$

$5.4 \div 900$
$5.4 \div 100 \div 9$
$0.054 \div 9 =$
54 thousandths $\div 9$
6 thousandths $= 0.006$

Name _____ Date _____

1. Divide. Show the division in the right-hand column in two steps. The first two have been done for you.

a. $1.2 \div 6 = 0.2$

b. $1.2 \div 60 = (1.2 \div 6) \div 10 = 0.2 \div 10 = 0.02$

c. $2.4 \div 4 =$ 0.6

24 tenths ÷ 4
= 6 tenths = 0.6

d. $2.4 \div 40 =$ 0.06

2.4 ÷ 10 ÷ 4
0.24 ÷ 4 = 24 hundredths ÷ 4
= 6 hundredths = 0.06

e. $14.7 \div 7 =$ 2.1

147 tenths ÷ 7
= 21 tenths = 2.1

$$7\overline{)147}\quad 21,\ 14\downarrow,\ 07,\ -7,\ 0$$

f. $14.7 \div 70 =$ 0.21

14.7 ÷ 10 ÷ 7
1.47 ÷ 7 = 147 hundredths ÷ 7
21 hundredths = 0.21

g. $0.34 \div 2 =$ 0.17

34 hundredths ÷ 2
17 hundredths = 0.17

$$2\overline{)34}\quad 17,\ -2,\ 14,\ -14,\ 0$$

h. $3.4 \div 20 =$ 0.17

3.4 ÷ 10 ÷ 2
0.34 ÷ 2 = 34 hundredths ÷ 2
17 hundredths = 0.17

i. $0.45 \div 9 =$ 0.05

45 hundredths ÷ 9
5 hundredths =
0.05

j. $0.45 \div 90 =$ 0.005

0.45 ÷ 10 ÷ 9
0.045 ÷ 9 = 45 thousandths ÷ 9
5 thousandths = 0.005

k. $3.45 \div 3 =$ 1.15

345 hundredths ÷ 3
115 hundredths

$$3\overline{)345}\quad 115,\ 3\downarrow,\ 04,\ -3\downarrow,\ 15,\ 15,\ 0$$

l. $34.5 \div 300 =$ 0.115

34.5 ÷ 100 ÷ 3
0.345 ÷ 3 = 345 thousandths ÷ 3
115 thousandths = 0.115