



# Decimal Disco

To multiply and divide whole numbers and decimals by 10, 100 and 1000.



Use your **Place Value Grid** to help you to work out the answers to these calculations:

1) Multiplying and Dividing by 10.

a)  $65.6 \times 10 =$  \_\_\_\_\_

d)  $5342 \div 10 =$  \_\_\_\_\_

b)  $72.40 \div 10 =$  \_\_\_\_\_

e)  $12\,547 \div 10 =$  \_\_\_\_\_

c)  $639.67 \times 10 =$  \_\_\_\_\_

2) Multiplying and Dividing by 100.

a)  $65.67 \times 100 =$  \_\_\_\_\_

d)  $118 \div 100 =$  \_\_\_\_\_

b)  $46 \div 100 =$  \_\_\_\_\_

e)  $14\,523 \div 100 =$  \_\_\_\_\_

c)  $209.46 \times 100 =$  \_\_\_\_\_

3) Multiplying and Dividing by 1000.

a)  $4.1 \times 1000 =$  \_\_\_\_\_

d)  $10\,000 \div 1000 =$  \_\_\_\_\_

b)  $230 \div 1000 =$  \_\_\_\_\_

e)  $14\,000 \div 1000 =$  \_\_\_\_\_

c)  $199.02 \times 1000 =$  \_\_\_\_\_

4) 'Rock and roll' three dice to make a three-digit number. Multiply and divide your number by 10, 100 and 1000. Repeat this five times.

Number	$\times 10$	$\div 10$	$\times 100$	$\div 100$	$\times 1000$	$\div 1000$



# Decimal Disco

To multiply and divide whole numbers and decimals by 10, 100 and 1000.



Work out the answers to these calculations:

1) Multiplying and Dividing by 10.

a)  $65.9 \times 10 =$  \_\_\_\_\_

d)  $180\ 342 \div 10 =$  \_\_\_\_\_

b)  $1232.9 \div 10 =$  \_\_\_\_\_

e)  $132\ 507 \div 10 =$  \_\_\_\_\_

c)  $6399.67 \times 10 =$  \_\_\_\_\_

2) Multiplying and Dividing by 100.

a)  $6738 \times 100 =$  \_\_\_\_\_

d)  $9534 \div 100 =$  \_\_\_\_\_

b)  $461.1 \div 100 =$  \_\_\_\_\_

e)  $623\ 400 \div 100 =$  \_\_\_\_\_

c)  $2249.46 \times 100 =$  \_\_\_\_\_

3) Multiplying and Dividing by 1000.

a)  $4.13 \times 1000 =$  \_\_\_\_\_

d)  $100\ 000 \div 1000 =$  \_\_\_\_\_

b)  $3480 \div 1000 =$  \_\_\_\_\_

e)  $2\ 345\ 000 \div 1000 =$  \_\_\_\_\_

c)  $2199.52 \times 1000 =$  \_\_\_\_\_

4) 'Rock and roll' four dice to make a four-digit number. Multiply and divide this by 10, 100 and 1000. Repeat this five times.

Number	$\times 10$	$\div 10$	$\times 100$	$\div 100$	$\times 1000$	$\div 1000$



# Decimal Disco

To multiply and divide whole numbers and decimals by 10, 100 and 1000.



1) Work out the answers to these calculations:

a)  $25.8 \times 100 =$  \_\_\_\_\_

i)  $2544 \div 100 =$  \_\_\_\_\_

b)  $9832.9 \div 10 =$  \_\_\_\_\_

j)  $927\,400 \div 1000 =$  \_\_\_\_\_

c)  $5309.07 \times 1000 =$  \_\_\_\_\_

k)  $46.3 \times$  \_\_\_\_\_  $= 46\,300$

d)  $190\,412 \div 100 =$  \_\_\_\_\_

l) \_\_\_\_\_  $\div 1000 = 92.89$

e)  $22\,547 \div 1000 =$  \_\_\_\_\_

m)  $63.12 \times$  \_\_\_\_\_  $= 63\,120$

f)  $1008 \times 100 =$  \_\_\_\_\_

n) \_\_\_\_\_  $\div 1000 = 1000$

g)  $321.2 \div 10 =$  \_\_\_\_\_

o) \_\_\_\_\_  $\div 100 = 8745$

h)  $2940.4 \times 1000 =$  \_\_\_\_\_

2) 'Rock and roll' five dice to make a five-digit number. Multiply and divide this by 10, 100 and 1000. Repeat this five times.

Number	$\times 10$	$\div 10$	$\times 100$	$\div 100$	$\times 1000$	$\div 1000$



# Decimal Disco Answers

<b>1.</b>	Multiplying and Dividing by 10.		
a	$65.6 \times 10 = \mathbf{656}$	d	$5342 \div 10 = \mathbf{534.2}$
b	$72.40 \div 10 = \mathbf{7.24}$	e	$12\,547 \div 10 = \mathbf{1254.7}$
c	$639.67 \times 10 = \mathbf{6396.7}$		
<b>2.</b>	Multiplying and Dividing by 100.		
a	$65.67 \times 100 = \mathbf{6567}$	d	$118 \div 100 = \mathbf{1.18}$
b	$46 \div 100 = \mathbf{0.46}$	e	$14\,523 \div 100 = \mathbf{145.23}$
c	$209.46 \times 100 = \mathbf{20\,946}$		
<b>3.</b>	Multiplying and Dividing by 1000.		
a	$4.1 \times 1000 = \mathbf{4100}$	d	$10\,000 \div 1000 = \mathbf{10}$
b	$230 \div 1000 = \mathbf{0.23}$	e	$14\,000 \div 1000 = \mathbf{14}$
c	$199.02 \times 1000 = \mathbf{199\,020}$		
<b>4.</b>	'Rock and roll' three dice to make a three-digit number. Multiply and divide your number by 10, 100 and 1000. Repeat this five times.		
	<b>Multiple answers possible.</b>		



# Decimal Disco Answers

<b>1.</b>	Multiplying and Dividing by 10.		
a	$65.9 \times 10 = \mathbf{659}$	d	$180\,342 \div 10 = \mathbf{18\,034.2}$
b	$1232.9 \div 10 = \mathbf{123.29}$	e	$132\,507 \div 10 = \mathbf{13\,250.7}$
c	$6399.67 \times 10 = \mathbf{63\,996.7}$		
<b>2.</b>	Multiplying and Dividing by 100.		
a	$6738 \times 100 = \mathbf{673\,800}$	d	$9534 \div 100 = \mathbf{95.34}$
b	$461.1 \div 100 = \mathbf{4.611}$	e	$623\,400 \div 100 = \mathbf{6234}$
c	$2249.46 \times 100 = \mathbf{224\,946}$		
<b>3.</b>	Multiplying and Dividing by 1000.		
a	$4.13 \times 1000 = \mathbf{4130}$	d	$100\,000 \div 1000 = \mathbf{100}$
b	$3480 \div 1000 = \mathbf{3.48}$	e	$2\,345\,000 \div 1000 = \mathbf{2345}$
c	$2199.52 \times 1000 = \mathbf{2\,199\,520}$		
<b>4.</b>	'Rock and roll' four dice to make a four-digit number. Multiply and divide this by 10, 100 and 1000. Repeat this five times.		
	<b>Multiple answers possible.</b>		



# Decimal Disco Answers

<b>1.</b>	Work out the answers to these calculations:		
a	$25.8 \times 100 = \mathbf{2580}$	i	$2544 \div 100 = \mathbf{25.44}$
b	$9832.9 \div 10 = \mathbf{983.29}$	j	$927\,400 \div 1000 = \mathbf{927.4}$
c	$5309.07 \times 1000 = \mathbf{5\,309\,070}$	k	$46.3 \times \mathbf{1000} = 46\,300$
d	$190\,412 \div 100 = \mathbf{1904.12}$	l	$\mathbf{92\,890} \div 1000 = 92.89$
e	$22\,547 \div 1000 = \mathbf{22.547}$	m	$63.12 \times \mathbf{1000} = 63\,120$
f	$1008 \times 100 = \mathbf{100\,800}$	n	$\mathbf{1\,000\,000} \div 1000 = 1000$
g	$321.2 \div 10 = \mathbf{32.12}$	o	$\mathbf{8\,74\,500} \div 100 = 8745$
h	$2940.4 \times 1000 = \mathbf{2\,940\,400}$		
<b>2.</b>	'Rock and roll' five dice to make a five-digit number. Multiply and divide this by 10, 100 and 1000. Repeat this five times.		
	<b><i>Multiple answers possible.</i></b>		

### Disco Lights

How was your Decimal Disco today?

Colour the disco lights next to the statement that best describes how confident you felt when completing these calculations:



I found this task a bit tricky and need more help please.



I could do most of these calculations by myself, but I still need a bit more practise.



I feel confident that I can multiply and divide by 10, 100 and 1000.

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## Place Value Grid

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	●	Tenths	Hundredths	Thousandths
HTh	TTh	Th	H	T	O	●	t	h	th
						●			

## Place Value Grid

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	●	Tenths	Hundredths	Thousandths
HTh	TTh	Th	H	T	O	●	t	h	th
						●			

## Place Value Grid



Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	●	Tenths	Hundredths	Thousandths
HTh	TTh	Th	H	T	O	●	t	h	th
						●			