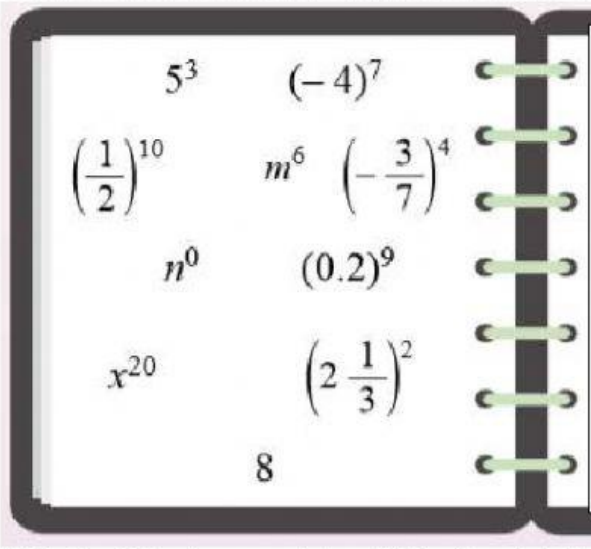
EXERCISE 1

1. Complete the following table with base or index for the given numbers or algebraic terms.



Base	Index	Base	index
5			9
	7		4
½		x	
	6		2
n		8	

2. Write the following repeated multiplications in index form.

a)	5 x 5 x 5 x 5 x 5 x 5			g)	0.3 x 0.3 x 0.3 x 0.3	
b)	(-2) x (-2) x (-2)			h)	$\frac{1}{4}\times\frac{1}{4}\times\frac{1}{4}\times\frac{1}{4}\times\frac{1}{4}\times\frac{1}{4}$	
c)	m x m x m x m x m x m x m			i)	n x n x n x n x n x n x n	
d)	6 x 6 x 6 x 6 x 6			j)	(- m) x (- m) x (- m) x (- m)	
e)	$\frac{1}{2}\times\frac{1}{2}\times\frac{1}{2}\times\frac{1}{2}$			k)	0.5 x 0.5 x 0.5 x 0.5 x 0.5 x 0.5 x 0.5	
f)	$1\frac{2}{3}\times1\frac{2}{3}\times1\frac{2}{3}$			l)	$\left(-\frac{1}{n}\right)\times\left(-\frac{1}{n}\right)\times\left(-\frac{1}{n}\right)\times\left(-\frac{1}{n}\right)$	

3. Convert the numbers or algebraic terms in index form into repeated multiplications (fill in with number 1 for unnecessary box)

a) $(-3)^3$

= x x x x x x

b) $(2.5)^4$

= x x x x x x

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c) k^6

= x x x x x x

d) $(3n)^5$

= x x x x x x

EXERCISE 2

1. Calculate the value of each of the following numbers in index form

a) 9^4 =	b) $(-4)^5$ =	c) $(2.5)^3$ =	d) $(-3.2)^3$ =
e) $\left(\frac{3}{8}\right)^5$ = _____	f) $\left(-\frac{1}{6}\right)^4$ = _____	g) $\left(1\frac{2}{3}\right)^2$ = _____	h) $\left(-2\frac{1}{3}\right)^3$ = _____

2. Write each of the following numbers in index form using the stated base in brackets
(Fill in with symbol / for unnecessary box)

a) 810000 [base of 30]

Answer:

b) 64000 [base of 40]

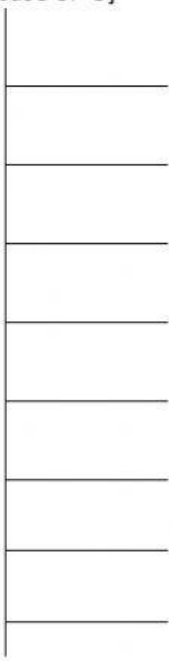
Answer :

c) -0.00032 [base of -0.2]

Answer :

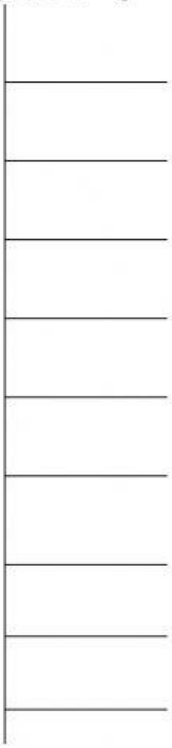
LIVEWORKSHEETS

d) 15 625 [base of -5]



Answer :

e) -16 384 [base of -4]



Answer :

3. Simplify each of the following :

a) $7^5 \times 7 \times 7^4$ = =	b) $(-0.5)^5 \times (-0.5) \times (-0.5)$ = =
c) $5m^3 \times \frac{1}{5}m \times (-6)m^2$ = x _____ x ( ) x	d) $n \times \frac{3}{16}n^5 \times \frac{4}{3}n^3 \times n^2$ = _____ x _____ x

LIVEWORKSHEETS

e)

$2k^6 \times 50k \times \left(-\frac{1}{10}k^2\right)$

= x x _____ x

=

d)

$2p^7 \times (-p^5) \times 7p^2$

= x ( ) x ( ) x

=

LIVEWORKSHEETS