

Name:

Exam Style Questions

Dimensional Analysis



Equipment needed: Pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

Video 97



Answers and Video Solutions



1. This table shows some expressions.



The letters l , m and n represent lengths.

Place a tick in the appropriate column for each expression to show whether the expression can be used to represent a length, an area, a volume or none of these.

Expression	Length	Area	Volume	None of these
$l + m + n$				
mn				
$2\pi m$				

(3)

2. Here are some expressions.



xyz	$x(y + z)$	$3x + y^2$	$x + y$	$x^2 + y^2$

The letters x , y and z represent lengths.

Two of the expressions could represent areas.

Tick the boxes underneath these two expressions.

(2)

3. This table shows some expressions.



The letters a, b and c represent lengths.

Place a tick in the appropriate column for each expression to show whether the expression can be used to represent a length, an area, a volume or none of these.

Expression	Length	Area	Volume	None of these
abc				
$2a + 2b$				
$a^2 + c$				

(3)

4. In the expressions in the table x, y and z represent lengths.



	Expression	Length	Area	Volume	None of these
A	yz		✓		
B	$x + yz$				
C	x^3				
D	$xy(x + z)$				

(a) Complete the table to show whether each expression could represent a length, an area, a volume or none of these.

(2)

(b) Explain your answer for expression B.

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(1)

5. In each of these expressions x , y and z represent lengths.



State whether each expression could represent a length (L), an area (A), a volume (V), none of these (N).

xyz could represent

$yz(x + y^2)$ could represent

$xy + xz$ could represent

x^2y could represent

(4)

6. In each of these expressions x , y and z represent lengths.



State whether each expression could represent a length (L), an area (A), a volume (V), none of these (N).

(a)

$$x^2y^2$$

could represent

(b)

$$\frac{x^2 + y^2}{z}$$

could represent

(c)

$$\frac{y + z}{z}$$

could represent

(3)

7. The table below shows some expressions.



a, b and c represent lengths.

$2c^3$	$\frac{\pi c^3}{a}$	πac	$bc + a$	$2\pi(a + c)$	$5(a + b)^2$

Tick three expressions that represent areas.

(3)