

Name: _____

Exam Style Questions



Dimensional Analysis

Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

Guidance

1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

www.corbettmaths.com/contents

Video 97



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 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
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
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.

*x is a length. yz is an area.
Therefore calling these could be inconsistent.*

(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 V

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

$xy + xz$ could represent A

x^2y could represent V

(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 N

(b)

$\frac{x^2 + y^2}{z}$ could represent L

(c)

$\frac{y + z}{z}$ could represent N

(3)