

Added Value Unit

PRACTICE
C
TEST

Part One

Time allowed: 20 minutes

You may **not** use a calculator for this part of the test.

- Jenny is a salesperson.
Each month Jenny earns a bonus of 3% of the value of goods she sells.
In July, Jenny sold goods to the value of £4500.
How much bonus did Jenny earn in July?
- The number of goals scored in matches played by some hockey teams are shown.
3, 1, 4, 2, 2, 3, 2, 6
Find the mean number of goals scored.
Give your answer correct to 2 decimal places.
- A box contains 40 chocolates.
 $\frac{5}{8}$ of the chocolates are soft-centred.
How many chocolates in the box are soft-centred?
- Mary has two containers of plain flour.
One contains 2.35 kg and the other contains 1.415 kg.
Mary uses 3.2 kg of flour to bake a cake.
How much flour will Mary have left?
- A tin of paint costs £13.85.
Find the cost of 3 tins of paint.

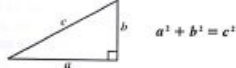
FORMULAE LIST:

Circumference of a circle: $C = \pi d$
Area of a circle: $A = \pi r^2$
Volume of a triangular prism: $V = Ah$

TRIGONOMETRY RATIOS IN A RIGHT-ANGLED TRIANGLE:

$\tan x^\circ = \frac{\text{opposite}}{\text{adjacent}}$
 $\sin x^\circ = \frac{\text{opposite}}{\text{hypotenuse}}$
 $\cos x^\circ = \frac{\text{adjacent}}{\text{hypotenuse}}$

THEOREM OF PYTHAGORAS:



GRADIENT:

$\text{Gradient} = \frac{\text{vertical height}}{\text{horizontal distance}}$

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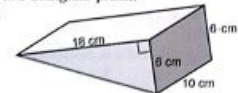
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Part Two

Time allowed: 40 minutes

You may use a calculator for this part of the test.

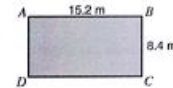
- Solve. (a) $3x - 4 = x + 4$ (b) $3(2x + 1) = 15$
- The diagram shows a plastic wedge which is a triangular prism.
Calculate the volume of the plastic wedge.



- A number sequence begins: 2, 6, 10, 14, ...

Term	1	2	3	4	5	6
Number	2	6	10	14		

- Write down the next two numbers in this sequence.
 - Write a formula that can be used to find any term in the sequence.
 - Use your formula to find the 20th term in the sequence.
- Calculate the distance that Chris cycles in 1 hour and 15 minutes at an average speed of 24 kilometres per hour.
 - A builder marks out a rectangular building plot, $ABCD$.
He checks that the plot is rectangular by measuring the diagonals, AC and BD .
What length should they be?
Give your answer in metres, correct to 2 decimal places.



- A cat is on the ground, 25 m from the foot of a house.
A bird is perched on the gutter of the house, 15 m from the ground.
Calculate the angle of elevation, a , from the cat to the bird.
Give your answer correct to the nearest degree.
- On squared paper, draw and label the x axis from -4 to 6 and the y axis from -6 to 3 .
(a) Plot the points: $B(-4, -2)$, $C(4, 2)$ and $D(6, -2)$.
(b) Plot point A so that $ABCD$ is a kite.

