

**HIGHER TIER
MINI PRACTICE EXAM 2**

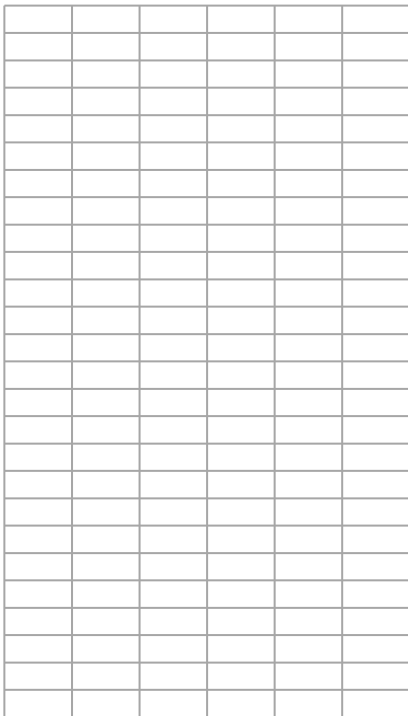


**NON-CALCULATOR
20 MINUTES ALLOWED**

1.
Expand and simplify $4(x + 5) - 3(2x - 3)$

(2)

2.
Plot the graph $y = x^2 + 4x + 1$ for $x = -3$ to 3 on the grid below.



(4)

3.
Megan makes bracelets.
Each bracelet requires 8 beads and 11 centimetres of string.
Megan bought a box containing 350 beads.
She also bought three rolls of string.
The rolls of string are 1.5 metres long.

Work out the maximum number of bracelets Megan can make with the materials she has.

(3)

4.

Shane weighs 56 kilograms, to the nearest kilogram.

Write down an error interval for Shane's weight.

(2)

4.

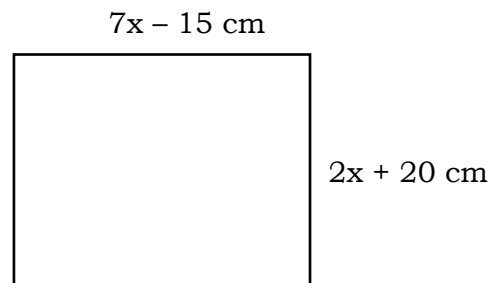
Express $\sqrt{27} + 7\sqrt{3} - 2\sqrt{48}$ in the form $a\sqrt{3}$ where a is an integer.

(4)

5.

The shape below is a square.

Show that the area of the square is 1156 cm^2 .



(5)