Level 2 Further Maths

Distance Between Two Points

Ensure you have: Pencil or pen

Guidance

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

Revision for this topic

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1. Shown below are the points A(1, 4) and B(7, 15)

Calculate the length of the line joining A and B.

2. Shown below are the points A(−9, −2) and B(3, −10)

Calculate the length of the line joining A and B.
3. Calculate the distance between the points \((-5, 7)\) and \((-3, -2)\).

4. Calculate the distance between the points \((-15, 2)\) and \((35, 17)\).
5. Shown below is triangle ABC

Calculate the perimeter of the triangle.
6. The distance between the points (1, 2) and (16, p) is 17.
Find the possible values of p.

7. The distance between the points (−3, −4) and (q, 5) is 15.
Find the possible values of q.
8. The point C has coordinates \((-5, 4)\)
The point D has coordinates \((6, 1)\)
The point E has coordinates \((9, −13)\)

The midpoint of CE is H
The midpoint of DE is I

Work out the distance between the points H and I
9. The line $L$ has equation $3x - 2y + 15 = 0$

The line $L$ intersects the x-axis at the point $A$. The line $L$ intersects the y-axis at the point $B$.

Find the distance between the points $A$ and $B$. 

\[ \text{Distance} = \sqrt{\left( x_2 - x_1 \right)^2 + \left( y_2 - y_1 \right)^2} \]
10. The points D and E have coordinates \((-4, 13)\) and \((6, 2)\). Given DE is the diameter of the circle C.

(a) Find the coordinates of the centre of circle C.

(b) Calculate the exact length of the diameter DE.

(c) Find the equation of C