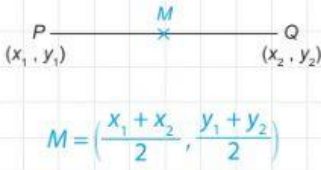
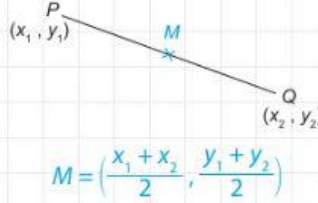


7.2 Titik Tengah dalam Sistem Koordinat Cartes

- S.P: 7.2.2** Menerbitkan rumus titik tengah antara dua titik pada satah Cartes.
S.P: 7.2.3 Menentukan koordinat titik tengah antara dua titik pada satah Cartes.

Diberi bahawa M ialah titik tengah bagi garis lurus PQ . Labelkan titik M dan terbitkan rumus bagi titik tengah M . **TP 2**

It is given that M is the midpoint of the straight line PQ . Label the point M and derive the formula of point M .

<p>1</p>  <p style="text-align: center;">$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$</p>	<p>2</p>  <p style="text-align: center;">$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$</p>
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Cari koordinat bagi titik tengah garis lurus yang menyambung pasangan titik yang berikut. TP 3

Find the coordinates of the midpoint of the straight line joining the following pairs of points.

<p>3 (2, 5), (6, 11)</p> <p>Titik tengah $= \left(\frac{2+6}{2}, \frac{5+11}{2} \right) = (4, 8)$</p>	<p>4 (-3, 4), (6, 7)</p> <p>Titik tengah $= \left(\frac{-3+6}{2}, \frac{4+7}{2} \right) = \left(\frac{3}{2}, \frac{11}{2} \right)$</p>	<p>5 (-5, 6), (-9, 2)</p> <p>Titik tengah $= \left(\frac{-5-9}{2}, \frac{6+2}{2} \right) = (-7, 4)$</p>
<p>6 (-1, 5), (-7, 0)</p> <p>Titik tengah $= \left(\frac{-1-7}{2}, \frac{5+0}{2} \right) = (-4, \frac{5}{2})$</p>	<p>7 (-2, -8), (-5, -6)</p> <p>Titik tengah $= \left(\frac{-2-5}{2}, \frac{-8-6}{2} \right) = \left(-\frac{7}{2}, -7 \right)$</p>	<p>8 (0, 8), (-4, 5)</p> <p>Titik tengah $= \left(\frac{0-4}{2}, \frac{8+5}{2} \right) = (-2, \frac{13}{2})$</p>

Hitungkan. TP 3

Calculate.

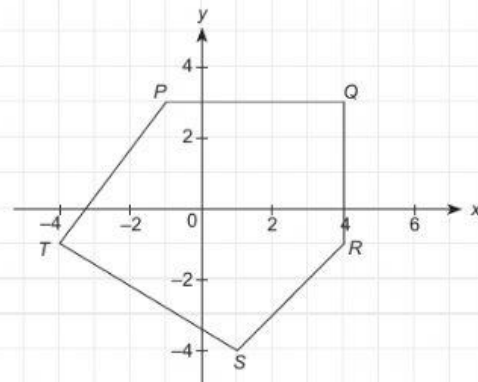
9 Rajah di sebelah menunjukkan sebuah pentagon, $PQRST$.

The diagram on the right shows a pentagon, $PQRST$.

Nyatakan koordinat titik tengah bagi

State the coordinates of the midpoint of

- (a) PR (b) QS (c) TR (d) PS



$P(-1, 3), Q(4, 3), R(4, -1), S(-1, -4), T(-4, -1)$

(a) Titik tengah $PR = \left(\frac{-1+4}{2}, \frac{3-1}{2} \right)$

$= \left(\frac{3}{2}, 1 \right)$

(b) Titik tengah $QS = \left(\frac{4+1}{2}, \frac{3-4}{2} \right)$

$= \left(\frac{5}{2}, -\frac{1}{2} \right)$

(c) Titik tengah $TR = \left(\frac{4-4}{2}, \frac{-1-1}{2} \right)$
 $= (0, -1)$

(d) Titik tengah $PS = \left(\frac{-1+1}{2}, \frac{3-4}{2} \right)$
 $= \left(0, -\frac{1}{2} \right)$