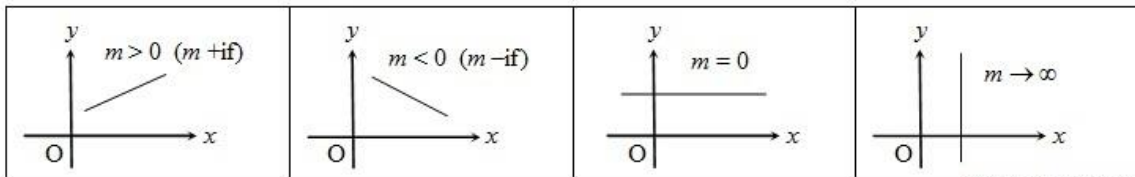


Garis Lurus

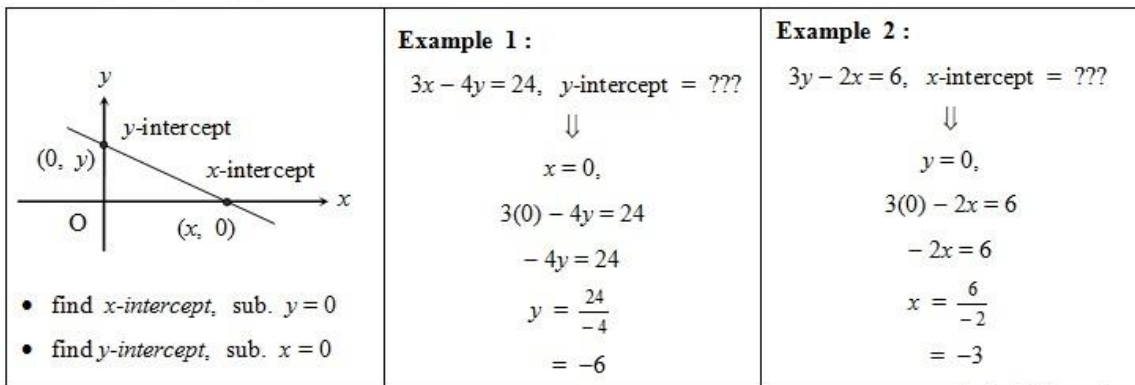
(16) THE STRAIGHT LINE GARIS LURUS

- (a) Type of straight line and their respective gradient, m
Jenis Garis Lurus, Kecerunan, m



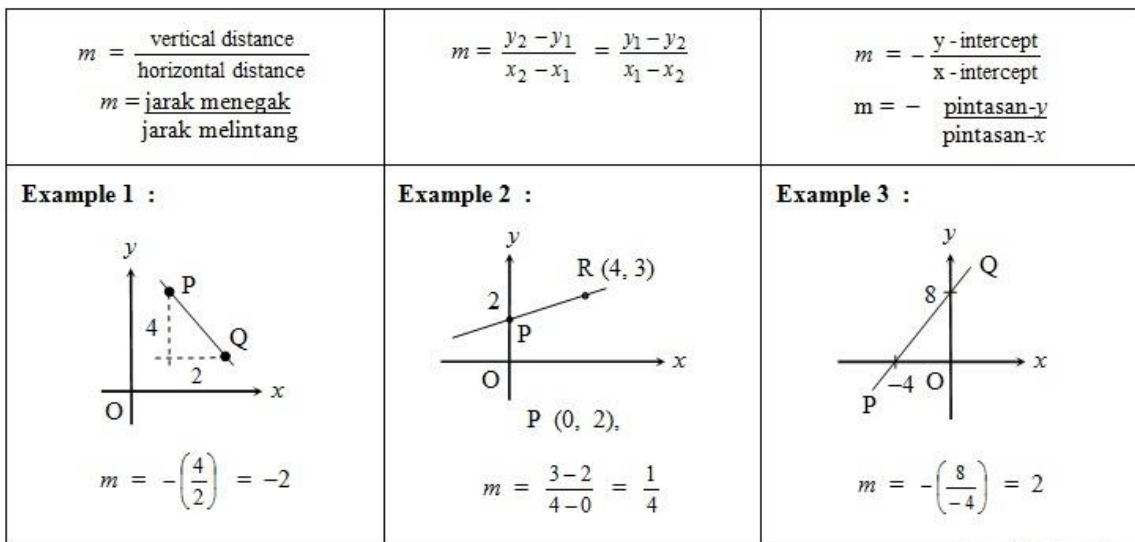
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- (b) y -intercept (c), and x -intercept of a straight line
Pintasan pada paksi- y , c



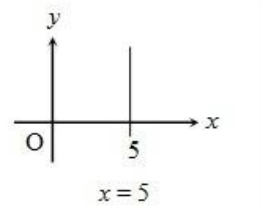
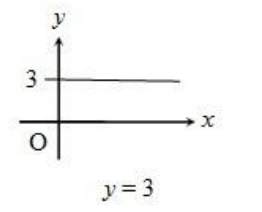
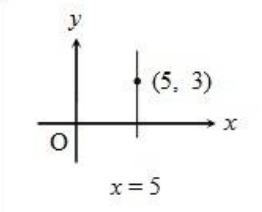
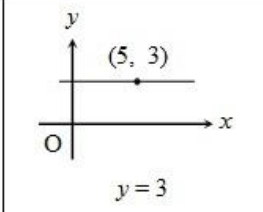
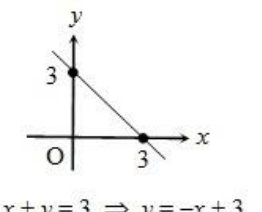
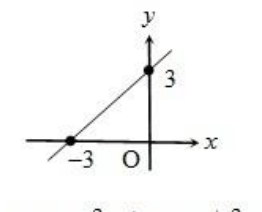
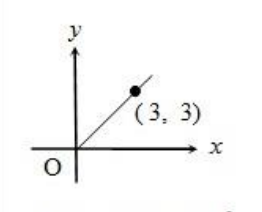
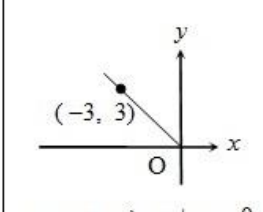
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- (c) Gradient of a straight line, m
Kecerunan, m



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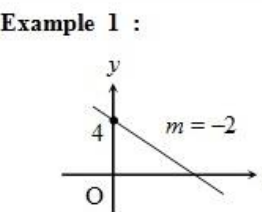
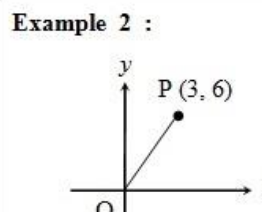
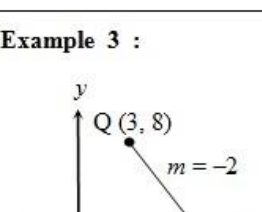
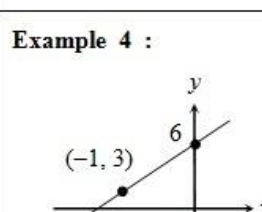
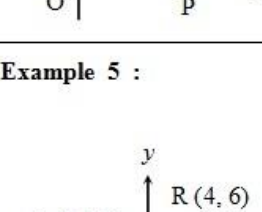
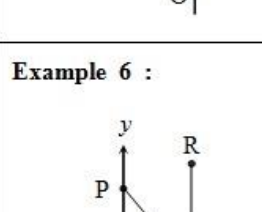
(d) Equation of a straight line

 $x=5$	 $y=3$	 $x=5$	 $y=3$
 $x+y=3 \Rightarrow y=-x+3$	 $y-x=3 \Rightarrow y=x+3$	 $y=x \Rightarrow x-y=0$	 $y=-x \Rightarrow x+y=0$

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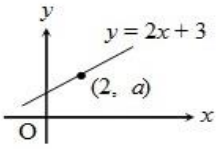
(e) Form equation of a straight line, $y=mx+c$, where $m = \text{gradient}$
 $c = y\text{-int except}$

Membentuk persamaan garis lurus, $y=mx+c$, dgn, m ialah kecerun dan c adalah pintasan pd paksi-y

Example 1 :  $y=mx+c$ $y=-2x+4$	Example 2 :  $m = \frac{6-0}{3-0} = 2$ $y=mx+c$ $y=2x$
Example 3 :  $y=mx+c$ $8=-2(3)+c$ $8=-6+c$ $8+6=c$ $14=c$ $y=-2x+14$	Example 4 :  $y=mx+c$ $3=m(-1)+6$ $3=-m+6$ $m=6-3$ $m=3$ $y=3x+6$
Example 5 :  $m = \frac{6-2}{4-(-2)} = \frac{1}{2}$ $y=mx+c$ $6 = \frac{1}{2}(4)+c$ $6=2+c$ $4=c$ $y = \frac{1}{2}x+4$	Example 6 :  $y=0,$ $2x+0=5$ $2x=5$ $x = \frac{5}{2}$ equation of QR = ???

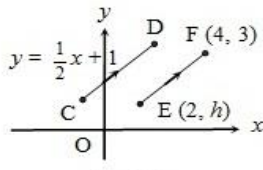
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f) Solve problems involving the equation of a straight line – Penyelesaian Masalah

<p>Example 1 :</p>  <p style="margin-left: 100px;">$y = 2x + 3$</p> <p style="margin-left: 100px;">$y = 2x + 3$</p> <p style="margin-left: 100px;">$a = 2(2) + 3$</p> <p style="margin-left: 100px;">$a = 7$</p> <p style="margin-left: 100px;">$a = ???$</p>	<p>Example 2 :</p> <p style="margin-left: 40px;">$2x - 7y = 14, m = ???$</p> <p style="margin-left: 40px;">$-7y = -2x + 14$</p> <p style="margin-left: 40px;">$7y = 2x - 14$</p> <p style="margin-left: 40px;">$y = \frac{2}{7}x + 2$</p> <p style="margin-left: 40px;">$\therefore m = \frac{2}{7}$</p>
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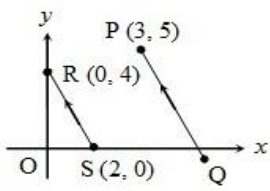
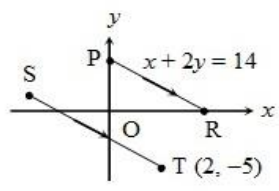
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(g) Parallel lines – Garis Selari, $m_1 = m_2$

<p>Example 1 :</p> <p style="margin-left: 40px;">$2y = x + 6$ is parallel to $4y = px + 9, p = ???$</p> <p style="margin-left: 40px;">$2y = x + 6 \quad 4y = px + 9 \quad \frac{1}{2} = \frac{p}{4}$</p> <p style="margin-left: 40px;">$y = \frac{1}{2}x + 3 \quad y = \frac{p}{4}x + \frac{9}{4} \quad 2p = 4$</p> <p style="margin-left: 40px;">$m_1 = \frac{1}{2} \quad m_2 = \frac{p}{4} \quad p = \frac{4}{2}$</p> <p style="margin-left: 40px;">$p = 2$</p>	<p>Example 2 :</p>  <p style="margin-left: 40px;">$y = \frac{1}{2}x + 1$</p> <p style="margin-left: 40px;">$y = \frac{1}{2}x + 3$</p> <p style="margin-left: 40px;">$h = ???$</p> <p style="margin-left: 40px;">$\frac{1}{2} = \frac{h-3}{2-4}$</p> <p style="margin-left: 40px;">$\frac{1}{2} = \frac{h-3}{-2}$</p> <p style="margin-left: 40px;">$2h - 6 = -2$</p> <p style="margin-left: 40px;">$2h = 4$</p> <p style="margin-left: 40px;">$h = 2$</p>
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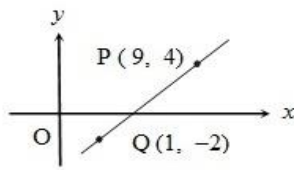
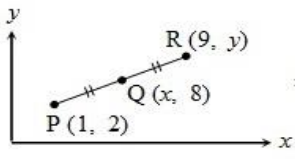
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(h) Form equation of a parallel line – Menerbitkan Persamaan dari Garis Selari

<p>Example 1 :</p>  <p style="margin-left: 100px;">$m = -\left(\frac{4}{2}\right) = -2$</p> <p style="margin-left: 100px;">$y = mx + c$</p> <p style="margin-left: 100px;">$5 = -2(3) + c$</p> <p style="margin-left: 100px;">$5 = -6 + c$</p> <p style="margin-left: 100px;">$5 + 6 = c$</p> <p style="margin-left: 100px;">$11 = c$</p> <p style="margin-left: 100px;">$y = -2x + 11$</p> <p style="margin-left: 40px;">equation of PQ = ???</p>	<p>Example 2 :</p>  <p style="margin-left: 40px;">$x + 2y = 14$</p> <p style="margin-left: 40px;">$2y = -x + 14$</p> <p style="margin-left: 40px;">$y = -\frac{1}{2}x + 7$</p> <p style="margin-left: 40px;">$y = mx + c$</p> <p style="margin-left: 40px;">$-5 = -\frac{1}{2}(2) + c$</p> <p style="margin-left: 40px;">$-5 = -1 + c$</p> <p style="margin-left: 40px;">$-4 = c$</p> <p style="margin-left: 40px;">$y = -\frac{1}{2}x - 4$</p> <p style="margin-left: 40px;">equation of ST = ???</p>
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(i) Distance – Jarak, Midpoint – Titik Tengah

<p style="text-align: center;">$Jarak = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$</p>	<p style="text-align: center;">$Titik\ Tengah, (x, y) = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$</p>
<p>Example :</p>  <p style="margin-left: 40px;">distance PQ = $\sqrt{(9-1)^2 + [4-(-2)]^2}$</p> <p style="margin-left: 40px;">= 10</p>	<p>Example :</p>  <p style="margin-left: 40px;">$\Rightarrow x = ???, y = ???$</p> <p style="margin-left: 40px;">$\frac{1+9}{2} = x$</p> <p style="margin-left: 40px;">$5 = x$</p> <p style="margin-left: 40px;">$\frac{2+y}{2} = 8$</p> <p style="margin-left: 40px;">$2+y = 16$</p> <p style="margin-left: 40px;">$y = 14$</p>

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