1) (b) 3

2) $\sqrt{(4-1)^2+(0-4)^2}$

$\Rightarrow \sqrt{(3)^2+(-4)^2}$

$\Rightarrow \sqrt{9+16}$

$\Rightarrow \sqrt{25} = 5$ (b)

3) (a) The point (−5, 1) (1, p) and (4, −2) are collinear if the value of p is:

a) 3

4) $A = (a+b,\ a-b)$

$B = (a-b,\ -a-b)$

$AB = \sqrt{[(a-b)^2 - (a-b)^2] + [(a-b) - (-a$

$[a-b+a+b]^2 + [-a-b+a+$

$\sqrt{[2a]^2 + [-2a]^2}$

$\Rightarrow \sqrt{4a^2 + 4a^2}$

or

$\Rightarrow \sqrt{~~(2a-2a)^2 + 2AB~~}$

$\Rightarrow \sqrt{2ab}$

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5) $5 = \sqrt{(3-x)^2 + \text{[illegible]}}$

$25 = (3-x)^2 + 9$

$16 = (3-x)^2$

$\pm 4 = 3 - x$

so $x = -4 - 3 = -7$

$4 - 3 = 1$

5 -8, 21

[illegible]

= 8 (b)

Given point (-3,1) (1,r) and [illegible] are collinear. If the [illegible]

[illegible]

$(a+b, a-b)$

$(a-b, -a-b)$

$\sqrt{[(a+b)-(a-b)]^2 + [(a-b)-(-a-b)]^2}$

$[a-b+a+b]^2 + [-a-b+a+b]^2$

$\sqrt{[2a]^2 + [-2a]^2}$

$\sqrt{4a^2 + 4a^2}$

[illegible]