JAWAPAN KERTAS 2 SET 7

1. $k = 3.731$, $p = 1.577$, $k = 0.269$, $p = 0.423$

2.

$\sqrt{x}$	2	4	6	8	10	12
$\log_{10} y$	0.27	0.42	0.59	0.74	0.96	1.05

Correct axes and uniform scale
All points plotted correctly
Line of best fit

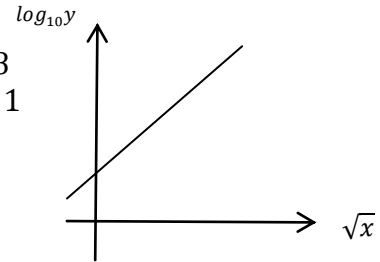$\log_{10} y = \log_{10} k \sqrt{x} + \log_{10} p$
(i) $\log_{10} p = 0.11$ (ii) $\log_{10} k = 0.08$
             $P = 1.288$ $k = 1$

3.   (a) Guna $I = \frac{P_{2007}}{2005} \times 100$

         $x = 48.6$, $y = 135$ $z = 80$

      (b) i) $120 \times 25 + 130m + 135 \times 80 + 139 \times 30$

             guna $\hat{I} = \frac{\sum I_i W_i}{\sum w_i}$

              $132.1 = \dfrac{(120 \times 25) + 130m + (135 \times 80) + (139 \times 30)}{135 + m}$

                    $m = 65$

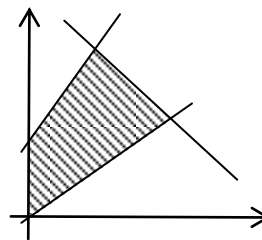   ii) $150 \times \frac{100}{132.1} =$ RM113.55

         iii) $\bar{I}_{08/05} = 171.73$

4. (a) $I : x + y \le 150$

          $II : y \ge \frac{1}{2}x$

          $III : y - x \le 80$

          Refer the graph paper

       (i) $x = 100$

       (ii)   maximum point (35, 115) ➜ Profit $= 3(35) + 5(115)$ $= $ RM 680

5.   (a) (i) Q $(- 2, 4)$ (ii) 10

       (b) T $(4 , - 2)$

       (c) (i) $3x^2 + 3y^2 - 32x + 32y - 44 = 0$

          (ii) $b^2 - 4ac = 11552 > 0$, yes, the locus intersect x-axis.

6.   (a) (i) -8 i + 15 j   (ii) $-\frac{8}{17}$ i + $\frac{15}{17}$ j   (b) $p = -\frac{8}{3}$