bees scatter graphs

draw a scatter graph for each set of data

(1)

this data is the number of honey producing bee colonies in USA (× 1,000,000) for certain years

year	bee colonies
1960	5
1964	4.7
1969	4.4
1974	4.2
1978	4.1
1982	4.3
1987	3.3
1992	3.1
1997	2.7
2002	2.6
2007	2.4

try to draw a line of best fit and work out its equation

when does this line suggest bee colonies would die out?

(2)

this data shows how the number of bee visits per 5 minute interval affects the number of seeds a plant produces

av. honey bee visits/5mins	no. of onion seeds per umbel
2.2	50
4	450
6	600
4.5	200
2.4	320
3.6	240
3.2	220
8	800
3.4	200
7	600

does this help a claim that increasing the numbers of bees would increase food production?

(3)

Varroa mites attack honey bees; the data shows the size of a sample chosen and the total number of mites in that sample

estimated bees per sample	no. of mites in the sample
450	23
500	26
405	21
270	18
360	25
390	11
450	11
360	15
300	15

is there any kind of correlation in this data between sample size and the number of mites ?

(4)

this data shows per colony the number of bees standing guard and the number of hovering bee guards

no. of standing guards	no. of hovering guards
18	3
22	4
30	7
4	1
15	4
50	8
5	2
12	2
10	3
18	1

is there any kind of correlation in this data between the no. of standing guards and no. of hovering guards in a colony?

(1)

(Graph with x-axis labeled 1960, 1970, 1980, 1990, 2000, 2010 and y-axis labeled 1, 2, 3, 4, 5)

(3)

(Graph with x-axis labeled 200, 300, 400, 500 and y-axis labeled 0, 10, 20, 30)

(2)

(Graph with x-axis labeled 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 and y-axis labeled 100, 200, 300, 400, 500, 600, 700, 800)

(4)

(Graph with x-axis labeled 0, 10, 20, 30, 40, 50 and y-axis labeled 0, 2, 4, 6, 8, 10)