## Question 1

Answer

If the gamekeepers moor is 4,300 ha in total area, estimate the total number of individual grouse he will have in March? If required, round your answer down to nearest full number.

Average (mean) no. of pairs per 1 km2

= (8 + 10 + 4 + 2 + 9) divided by 5
= 6.6 pairs per 1 km2

Total number of grouse on 4,300ha (100ha = 1 km2)
= 4,300 divided by 100
= 43 km2

Therefore... (6.6 pairs per 1 km2) x 43 km2
= 6.6 x 43
= 283.8 pairs
= 567.6 total grouse

**Answer: 567 red grouse**

## Question 2

Answer

Calculate the ratio of young birds to old birds (young:old) from the brood count data collected in July.

Total young 5 + 2 + 4 + 7 + 3 + 1
Total old 2 + 2 + 1 + 2 + 2 + 1

= 22 young and 10 old
= (22 ÷ 10)
= 2.2 young for every 1 old
= 2.2:1 young to old

**Answer: 2.2 : 1 (y:o)**