MARKS

8

(4, 4)

6. The mesh size **s** of a gill net is the minimum diameter of fish which can be caught in the net. For a particular species, fish diameters can be modelled by a $N(8, 2)$ distribution for one-year-old fish, by a $N(10, 2)$ distribution for two-year-old fish, and by a $N(12, 2)$ distribution for three-year-old fish.

(a) What should be the value of **s** to catch 90% of three-year-old fish?

(b) What proportion of one-year-old fish will be caught with the mesh size found in (a)?

(a)

(a)

Value of **s**

(b)

(b)

Proportion