D is proportional to S^2.

$D = 900$ when $S = 20$

Calculate the value of D when $S = 25$

(Total 4 marks)

D is proportional to S^2.

$D = 900$ when $S = 20$

Calculate the value of D when $S = 25$

$D = kS^2$ for some constant k

Substitute $D = 900$, $S = 20$

$900 = k \times 20^2$

$900 = 400k$

$\dfrac{900}{400} = k$

$\dfrac{9}{4} = k$

Therefore $D = \dfrac{9}{4} S^2$

(Total 4 marks)

When $S = 25$,

$D = \dfrac{9}{4} \times 25^2$

$D = 1406.25$