

6.2 Solutions to 6.1 Exercise

Answer 1

(a)	(b)	(c)
$E = \frac{10\,000}{r^2}$	25	2.5

Answer 2

(a)	(b)
$t = 6\sqrt{d}$	18

Answer 3

(a)	(b)
$d = 5\sqrt{h}$	49

Answer 4

(a)	(b)	(c)
$x = 4.9t^2$	44.1 m	$\frac{10}{7}$ or 1.4 seconds

Answer 5

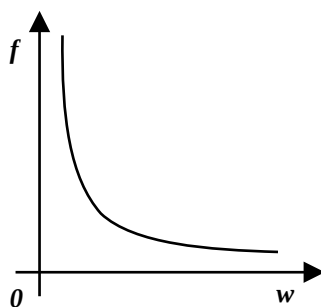
(a)	(b)	(c)
$d = 3.6\sqrt{h}$	28.8 km	289 m

Answer 6

(a)	(b)
$P = \frac{432}{V}$	12

Answer 7

(a)	(i)
	$f = \frac{300\,000}{w}$
	(ii)



(b)	240
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Answer 8**(a)**

$$P = \frac{25 w^3}{144} \text{ or } P = 0.17361 w^3$$

(b) 73.2 kilowatts**(c)** 12.6 m/s**Answer 9****(a)**

$$F = \frac{48}{d^2}$$

(b) 1.92 newtons**(c)** 4 cm**Answer 10****(a)**

$$M = 0.25 p^3$$

(b) 31.25