

1.10 (a) 9 sig figs are written as 9.81 m/s² and 2.0165 s are written as 2.0165 s
three sig figs

(b) Also three sig figs

$$(c) d = \frac{gt^2}{2} = \frac{(9.81 \text{ m/s}^2)(2.0165 \text{ s})^2}{2} = 19.9 \text{ m.}$$

Chapter 2

2.5	isotope	# protons = Z	# neutrons = mass number - Z
(a)	⁹ Be	4	5
	¹⁰ Be	4	6
(b)	¹² C	6	6
	¹³ C	6	7
(c)	¹⁴ N	7	7
	¹⁵ N	7	8
(d)	¹⁶ O	8	8
	¹⁷ O	8	9

2.9	element/ion	Z	q	N _e = Z - q
(a)	Li	3	0	3
	Li ⁺	3	+1	2
	He	2	0	2
(b)	K	19	0	19
	K ⁺	19	+1	18
	Ar	18	0	18
(c)	Cs	55	0	55
	Cs ⁺	55	+1	54
	Xe	54	0	54
(d)	Mg	12	0	12
	Mg ²⁺	12	+2	10
	Ne	10	0	10