

SOLUTIONS (Assignment #1)
MATH 171

1.4 p.20 # 5-52

EVEN NUMBERS

(6) y^9

(8) $3k^6$

(10) x^5

(12) $\frac{1}{s^3}$

(14) x^{24}

(16) n^{21}

(18) $a^5 x^5$

(20) $27a^6$

(22) $\frac{F^{20}}{t^{20}}$

(24) $\frac{27}{n^9}$

(26) 1

(28) 6

(30) $-\frac{1}{w^5}$

(32) t^{48}

(34) $-y^{15}$

(36) $-c^{16}$

(38) 3

ODD NUMBERS

(see back of)
BOOK

(40) $\frac{2}{i^{30}}$

(42) $\frac{1}{x}$

(44) $\frac{1}{9t}$

(46) $\frac{m^4}{9n^8}$

(48) $\frac{y^{10}}{4b^4}$

(50) $a^5 x^4$

(52) $\frac{n^{32} R^{34}}{T^{96}}$

SOLUTIONS

1.5 p. 23 # 3-36

	FLOATING point	SCIENTIFIC	ENGINEERING
③	45000	4.5×10^4	$45 \times 10^3 = 45K$
④	68000000	6.8×10^7	$68 \times 10^6 = 68M$
⑤	0.00201	2.01×10^{-3}	$2.01 \times 10^{-3} = 2.01m$
⑥	0.0000961	9.61×10^{-5}	96.1×10^{-6} $= 96.1\mu$
⑦	3.23	3.23×10^0	3.23×10^0
⑧	8.4	8.40×10^0	8.40×10^0
⑨	18.6	1.86×10^1	18.6×10^0
⑩	0.1	1×10^{-1}	100×10^{-3} $= 100m$
⑪	40000	4×10^4	40×10^3 $= 40K$
⑫	560000	5.6×10^5	560×10^3 $= 560K$
⑬	0.0087	8.7×10^{-3}	8.7×10^{-3} $= 8.7m$
⑭	0.7	7×10^{-1}	700×10^{-3} $= 700m$
⑮	6.09	6.09×10^0	6.09×10^0
⑯	100	1×10^2	100×10^0

$$(17) \quad 0.063 \qquad 6.3 \times 10^{-2} \qquad 63 \times 10^{-3} = 63 \text{ m}$$

$$(18) \quad 0.0000908 \qquad 9.08 \times 10^{-5} \qquad 90.8 \times 10^{-6} \\ = 90.8 \mu$$

$$(19) \quad 1 \qquad 1 \times 10^0 \qquad 1 \times 10^0$$

$$(20) \quad 10 \qquad 1 \times 10^1 \qquad 10 \times 10^0$$

$$(21) \quad 28000 (2000000000) \\ = (2.8 \times 10^4)(2 \times 10^9) \\ = 5.6 \times 10^{13} = 56 \times 10^{12} = 56 \text{ T}$$

$$(22) \quad 50000 (0.006) \\ = 5 \times 10^4 (6 \times 10^{-3}) \\ = 30 \times 10^1 \\ = 3 \times 10^2 = 300 \times 10^0$$

$$(23) \quad \frac{88000}{0.0004} = \frac{8.8 \times 10^4}{4 \times 10^{-4}} = 2.2 \times 10^8 = 220 \times 10^6 \\ = 220 \text{ M}$$

$$(24) \quad \frac{0.00003}{6000000} = \frac{3 \times 10^{-5}}{6 \times 10^6} = 0.5 \times 10^{-11} = 5 \times 10^{-12} \\ = 5 \text{ p}$$

$$(25) \quad 2 \times 10^{-35} + 3 \times 10^{-34} \\ = 0.2 \times 10^{-34} + 3 \times 10^{-34} \\ = 3.2 \times 10^{-34} \\ = 320 \times 10^{-36}$$

$$\begin{aligned} (26) \quad & 5.3 \times 10^{12} - 3.7 \times 10^{10} \\ & = 530 \times 10^{10} - 3.7 \times 10^{10} \\ & = 526.3 \times 10^{10} \\ & = 5.263 \times 10^{12} = 5.263 \text{ T} \end{aligned}$$

$$\begin{aligned} (27) \quad & (1.2 \times 10^{29})^3 = (1.2)^3 \times (10^{29})^3 \\ & = 1.728 \times 10^{87} \end{aligned}$$

$$\begin{aligned} (28) \quad & (2 \times 10^{-16})^{-5} = 2^{-5} \times (10^{-16})^{-5} \\ & = \frac{1}{2^5} \times 10^{80} \\ & = 0.03125 \times 10^{80} \\ & = 3.125 \times 10^{78} \end{aligned}$$

$$(29) \quad 4.8495 \times 10^{10} = 48.495 \times 10^9 = 48.495 \text{ G}$$

$$(31) \quad 1.587 \times 10^7 = 15.87 \times 10^6 = 15.87 \text{ M}$$

$$(32) \quad 19.16 \times 10^{-12} = 19.16 \text{ p} = 1.916 \times 10^{-11}$$

$$(33) \quad 9.9645 \times 10^{-3} = 9.9645 \text{ m}$$

$$(34) \quad 3.566 \times 10^{18}$$

$$(35) \quad 3.399 \times 10^{23} = 339.9 \times 10^{21}$$

$$(36) \quad 1.56 \times 10^{33}$$