

section 1.1

1.1 $\angle$

$$2) 96$$

48	2
24	2
12	2
6	2
3	2
1	3

$96 = (2)^5(3)^1$

divisible by
2, 3, and 6

prime number

$$4) 942$$

471	2
157	3
1	157

$942 = (2)^1(3)^1(157)^1$

divisible by
2, 3, and 6

$$6) 39075$$

7815	5
1563	5
521	3
1	521

prime number

$$39075 = (3)^1(5)^2(521)^1$$

divisible by
3, and 5

$$8) 78$$

39	2
13	3
1	13

$$78 = (2)^1(3)^1(13)^1$$

$$10) 400$$

200	2
100	2
50	2
25	2
5	5
1	5

$$400 = (2)^4(5)^2$$

$$12) 627$$

209	3
19	11
1	19

$$627 = (3)^1(11)^1(19)^1$$

14) 12, 16

$$\begin{array}{r|l} 12 & \\ 6 & 2 \\ 3 & 2 \\ 1 & 3 \end{array}$$

$$\begin{array}{r|l} 16 & \\ 8 & 2 \\ 4 & 2 \\ 2 & 2 \\ 1 & 2 \end{array}$$

$12 = (2)^2 (3)^1$

$16 = (2)^4$

$LCM = (2)^4 (3)^1 = \underline{\underline{48}}$

$$16) \begin{array}{r|l} 84 & \\ 42 & 2 \\ 21 & 2 \\ 7 & 3 \\ 1 & 7 \end{array}$$

$$\begin{array}{r|l} 90 & \\ 45 & 2 \\ 9 & 5 \\ 3 & 3 \\ 1 & 3 \end{array}$$

$84 = (2)^2 (3)^1 (7)^1$

$90 = (2)^1 (3)^2 (5)^1$

$$LCM = (2)^2 (3)^2 (5)^1 (7)^1 = (10)(2)(63) \\ = (10)(126) = \underline{\underline{1260}}$$

$$18) \begin{array}{r|l} 60 & \\ 30 & 2 \\ 15 & 2 \\ 3 & 5 \\ 1 & 3 \end{array}$$

$$\begin{array}{r|l} 72 & \\ 36 & 2 \\ 18 & 2 \\ 9 & 2 \\ 3 & 3 \\ 1 & 3 \end{array}$$

$60 = (2)^2 (3)^1 (5)^1$

$72 = (2)^3 (3)^2$

$$LCM = (2)^3 (3)^2 (5)^1 = (10)(2)^2 (9) \\ = (10)(36) = \underline{\underline{360}}$$

20) $3^2 - 18 \div (11 - 5)$

$= 9 - 18 \div (6)$

$= 9 - 3$

$= \underline{\underline{6}}$

22) $4 + 6(3 + 6)$

$= 4 + 6(9)$

$= 4 + 36$

$= \underline{\underline{40}}$

$$24) 33 \div 3 + 4(7-2)$$

$$= 11 + 4(5)$$

$$= 11 + 20$$

$$= \underline{\underline{31}}$$

$$26) 5(2+8 \cdot 4) - 7^2$$

$$= 5(2+32) - 49$$

$$= 5(34) - 49$$

$$= 170 - 49$$

$$= \underline{\underline{121}}$$

1.1 3

$$28) 5[2+4(3-2)]$$

$$= 5[2+4(1)]$$

$$= 5[2+4]$$

$$= 5[6]$$

$$= \underline{\underline{30}}$$

$$30) 10 + 3[6-2(4-2)] - 2^4$$

$$= 10 + 3[6-2(2)] - 16$$

$$= 10 + 3[6-4] - 16$$

$$= 10 + 3[2] - 16$$

$$= 10 + 6 - 16$$

$$= \underline{\underline{0}}$$