

7. Use divisibility test to test whether the following numbers are divisible by 6.

(i) 612

$$6+1+2=9 \checkmark \quad \therefore \text{The number is divisible by 6,} \quad (2 \text{ mks})$$

612 is divisible by 2

(ii) 83,472

(2 mks)

$$8+3+4+7+2=24 \quad \therefore \text{It is divisible by 6 because it is} \\ \text{divisible by both 2 \& 3,} \quad (2 \text{ mks})$$

$$2 \overline{) 83472} \checkmark$$

8. Use divisibility test to test whether the following numbers are divisible by 3.

(i) 20121

(ii) 722

(2 mks)

$$2+0+1+2+1=6 \quad \checkmark$$

$$7+2+2=11 \quad \checkmark$$

$$=6$$

$$=11$$

\therefore divisible \checkmark

\therefore not divisible \checkmark

9. The G.C.D. of two numbers is 12 and their L.C.M. is 240. If one of the numbers is 60, find the other number. (2 mks)

$$\text{Number} = \frac{\text{G.C.D.} \times \text{L.C.M.}}{\text{Number}} = \frac{12 \times 240}{60} = 48 \checkmark$$

$$= 12 \times 240 \checkmark$$

$$\underline{\underline{60}}$$

10. Express the following numbers in terms of their prime factors. (2 mks)

(i) 196

(ii) 715

(2 mks)

$$\begin{array}{l} 196 \\ \begin{array}{r} 2 \overline{) 196} \\ \underline{2} \\ 178 \\ \underline{2} \\ 156 \\ \underline{2} \\ 136 \\ \underline{2} \\ 116 \\ \underline{2} \\ 96 \\ \underline{2} \\ 76 \\ \underline{2} \\ 56 \\ \underline{2} \\ 36 \\ \underline{2} \\ 16 \\ \underline{2} \\ 8 \\ \underline{2} \\ 4 \\ \underline{2} \\ 2 \end{array} \\ \end{array} = 2^2 \times 7^2$$

$$\begin{array}{r} 715 \\ \begin{array}{r} 5 \overline{) 715} \\ \underline{5} \\ 215 \\ \underline{11} \\ 105 \\ \underline{14} \\ 13 \\ \underline{13} \\ 0 \end{array} \\ \end{array} = 5 \times 11 \times 13$$

$$= 2 \times 2 \times 7 \times 7$$

11. A man was born in 1966. His father was born in 1928 and the mother three years later. If the man's daughter was born in 1992 and the son 5 years earlier, find the difference between the age of the man's mother and that of his son. (3 mks)

MAN \rightarrow 1966

SON - mother

Father \rightarrow 1928

1987 - 1931 \checkmark

Mother \rightarrow 1931 \checkmark

Man's daughter - 1992

= 56 years

SON - 1987