

**KEY TO SCHOOL
CLASS BOOK OF
ARITHMETIC. PART II**

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Key to School Class Book of Arithmetic. Part II by Barnard Smith

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BARNARD SMITH

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PART II.

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KEY
TO
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ARITHMETIC.

PART II.

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1865.
1802

f 97

SOLUTIONS, &c.

PART II.

GREATEST COMMON MEASURE.

Ex. I. Page 4.

$$\begin{array}{r}
 \text{(1) } 15 \overline{)24} \begin{array}{l} 1 \\ 15 \\ \hline 9 \end{array} \overline{)16} \begin{array}{l} 1 \\ 9 \\ \hline 7 \end{array} \overline{)9} \begin{array}{l} 1 \\ 6 \\ \hline 3 \end{array} \\
 \therefore 3 \text{ is G.C.M.}
 \end{array}
 \qquad
 \begin{array}{r}
 \text{(2) } 25 \overline{)36} \begin{array}{l} 1 \\ 20 \\ \hline 16 \end{array} \overline{)20} \begin{array}{l} 1 \\ 16 \\ \hline 4 \end{array} \overline{)16} \begin{array}{l} 4 \\ 16 \\ \hline 0 \end{array} \\
 \therefore 4 \text{ is G.C.M.}
 \end{array}$$

$$\begin{array}{r}
 \text{(3) } 85 \overline{)75} \begin{array}{l} 2 \\ 70 \\ \hline 5 \end{array} \overline{)86} \begin{array}{l} 7 \\ 25 \\ \hline 61 \end{array} \\
 \therefore 5 \text{ is G.C.M.}
 \end{array}
 \qquad
 \begin{array}{r}
 \text{(4) } 30 \overline{)44} \begin{array}{l} 1 \\ 30 \\ \hline 14 \end{array} \overline{)30} \begin{array}{l} 2 \\ 28 \\ \hline 2 \end{array} \overline{)14} \begin{array}{l} 7 \\ 14 \\ \hline 0 \end{array} \\
 \therefore 2 \text{ is G.C.M.}
 \end{array}$$

$$\begin{array}{r}
 \text{(5) } 42 \overline{)81} \begin{array}{l} 1 \\ 42 \\ \hline 39 \end{array} \overline{)42} \begin{array}{l} 1 \\ 39 \\ \hline 3 \end{array} \overline{)39} \begin{array}{l} 13 \\ 39 \\ \hline 0 \end{array} \\
 \therefore 3 \text{ is G.C.M.}
 \end{array}
 \qquad
 \begin{array}{r}
 \text{(6) } 63 \overline{)147} \begin{array}{l} 2 \\ 126 \\ \hline 21 \end{array} \overline{)63} \begin{array}{l} 2 \\ 63 \\ \hline 0 \end{array} \\
 \therefore 21 \text{ is G.C.M.}
 \end{array}$$

GREATEST COMMON MEASURE.

$$\begin{array}{r} (7) \quad 90 \overline{) 105} \quad (1 \\ \underline{90} \\ 15 \overline{) 90} \quad (6 \\ \underline{90} \end{array}$$

\(\therefore\) 15 is G. C. M.

$$\begin{array}{r} (8) \quad 325 \overline{) 403} \quad (1 \\ \underline{325} \\ 78 \overline{) 325} \quad (4 \\ \underline{312} \\ 13 \overline{) 78} \quad (6 \\ \underline{78} \end{array}$$

\(\therefore\) 13 is G. C. M.

$$\begin{array}{r} (9) \quad 343 \overline{) 1024} \quad (2 \\ \underline{686} \\ 328 \overline{) 343} \quad (1 \\ \underline{328} \\ 20 \overline{) 328} \quad (16 \\ \underline{20} \\ 128 \\ \underline{120} \\ 8 \overline{) 20} \quad (2 \\ \underline{16} \\ 4 \overline{) 8} \quad (2 \\ \underline{8} \end{array}$$

\(\therefore\) 4 is G. C. M.

$$\begin{array}{r} (10) \quad 132 \overline{) 189} \quad (1 \\ \underline{132} \\ 57 \overline{) 182} \quad (2 \\ \underline{114} \\ 18 \overline{) 57} \quad (3 \\ \underline{54} \\ 3 \overline{) 18} \quad (6 \\ \underline{18} \end{array}$$

\(\therefore\) 3 is G. C. M.

$$\begin{array}{r} (11) \quad 532 \overline{) 1274} \quad (2 \\ \underline{1064} \\ 210 \overline{) 532} \quad (2 \\ \underline{420} \\ 112 \overline{) 210} \quad (1 \\ \underline{112} \\ 98 \overline{) 112} \quad (1 \\ \underline{98} \\ 14 \overline{) 98} \quad (7 \\ \underline{98} \end{array}$$

\(\therefore\) 14 is G. C. M.

GREATEST COMMON MEASURE.

3

$$\begin{array}{r}
 (12) \quad 285 \overline{) 871} \quad (1 \\
 \underline{285} \\
 586 \\
 \underline{570} \quad 295 \quad (1 \\
 186 \\
 \underline{186} \\
 00 \quad 188 \quad (1 \\
 00 \\
 \underline{00} \quad 87 \quad 99 \quad (2 \\
 74 \\
 \underline{13} \quad 35 \quad 37 \quad (1 \\
 25 \\
 \underline{12} \quad 25 \quad (2 \\
 24 \\
 \underline{1} \quad 12 \quad (12 \\
 \underline{12}
 \end{array}$$

∴ 1 is G.C.M.

$$\begin{array}{r}
 (13) \quad 576 \overline{) 1088} \quad (1 \\
 \underline{576} \\
 512 \\
 \underline{512} \quad 576 \quad (1 \\
 512 \\
 \underline{64} \quad 512 \quad (8 \\
 \underline{512}
 \end{array}$$

∴ 64 is G.C.M.

$$\begin{array}{r}
 (14) \quad 1905 \overline{) 8175} \quad (1 \\
 \underline{1905} \\
 6270 \\
 \underline{1270} \quad 1905 \quad (1 \\
 1270 \\
 \underline{635} \quad 1270 \quad (2 \\
 \underline{1270}
 \end{array}$$

∴ 635 is G.C.M.

$$\begin{array}{r}
 (15) \quad 858 \overline{) 996} \quad (1 \\
 \underline{858} \\
 138 \\
 \underline{138} \quad 858 \quad (6 \\
 828 \\
 \underline{30} \quad 138 \quad (4 \\
 120 \\
 \underline{18} \quad 90 \quad (1 \\
 18 \\
 \underline{12} \quad 18 \quad (1 \\
 12 \\
 \underline{6} \quad 12 \quad (2 \\
 \underline{12}
 \end{array}$$

∴ 6 is G.C.M.

4

GREATEST COMMON MEASURE.

$$\begin{array}{r}
 (16) \quad 2209 \overline{) 7921} \quad (8 \\
 \underline{6627} \\
 1294 \overline{) 2209} \quad (1 \\
 \underline{1294} \\
 915 \overline{) 1294} \quad (1 \\
 \underline{915} \\
 379 \overline{) 915} \quad (2 \\
 \underline{758} \\
 157 \overline{) 379} \quad (2 \\
 \underline{314} \\
 65 \overline{) 157} \quad (2 \\
 \underline{130} \\
 27 \overline{) 65} \quad (2 \\
 \underline{54} \\
 11 \overline{) 27} \quad (2 \\
 \underline{22} \\
 5 \overline{) 11} \quad (2 \\
 \underline{10} \\
 1 \overline{) 5} \quad (1 \\
 \underline{5}
 \end{array}$$

∴ 1 is G.C.M.

$$\begin{array}{r}
 (17) \quad 2145 \overline{) 8471} \quad (1 \\
 \underline{2145} \\
 1326 \overline{) 2145} \quad (1 \\
 \underline{1326} \\
 819 \overline{) 1326} \quad (1 \\
 \underline{819} \\
 507 \overline{) 819} \quad (1 \\
 \underline{507} \\
 312 \overline{) 507} \quad (1 \\
 \underline{312} \\
 195 \overline{) 312} \quad (1 \\
 \underline{195} \\
 117 \overline{) 195} \quad (1 \\
 \underline{117} \\
 78 \overline{) 117} \quad (1 \\
 \underline{78} \\
 39 \overline{) 78} \quad (2 \\
 \underline{78}
 \end{array}$$

∴ 39 is G.C.M.

∴