

Numbers, Operations and Relationships

Multiples and Factors (Grade 7) - Memo

1.
 - a) 13 – 13, 26, 39, 52, 65, 78, 91, 104, 117, 130
 - b) 413 – 413, 826, 1239, 1652, 2065, 2478, 2891, 3304, 3717, 4130
 - c) 65 – 65, 130, 195, 260, 325, 390, 455, 520, 585, 650
 - d) 687 – 687, 1374, 2061, 2748, 3435, 4122, 4809, 5496, 6183, 6870
 - e) 257 – 257, 514, 771, 1028, 1285, 1542, 1799, 2056, 2313, 2570
 - f) 827 – 827, 1654, 2481, 3308, 4135, 4962, 5789, 6616, 7443, 8270
 - g) 78 – 78, 156, 234, 312, 390, 468, 546, 624, 702, 780
 - h) 519 – 519, 1038, 1557, 2076, 2595, 3114, 3633, 4152, 4671, 5190
 - i) 58 – 58, 116, 174, 232, 290, 348, 406, 464, 522, 580
 - j) 720 – 720, 1440, 2160, 2880, 3600, 4320, 5040, 5760, 6480, 7200
 - k) 900 – 900, 1800, 2700, 3600, 4500, 5400, 6300, 7200, 8100, 9000
 - l) 17 – 17, 34, 51, 68, 85, 102, 119, 136, 153, 170

2.
 - a) 94 – 1, 2, 47, 94
 - b) 900 – 1, 2, 3, 4, 5, 6, 9, 10, 12, 15, 18, 20, 25, 30, 36, 45, 50, 60, 75, 90, 100, 150, 180, 225, 300, 450, 900
 - c) 553 – 1, 7, 79, 553
 - d) 32 – 1, 2, 4, 8, 16, 32
 - e) 165 – 1, 3, 5, 11, 15, 33, 55, 165
 - f) 600 – 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 25, 30, 40, 50, 60, 75, 100, 120, 150, 200, 300, 600
 - g) 403 – 1, 13, 31, 403
 - h) 231 – 1, 3, 7, 11, 21, 33, 77, 231
 - i) 909 – 1, 3, 9, 101, 303, 909
 - j) 185 – 1, 5, 37, 185

k) $824 - 1, 2, 4, 8, 103, 206, 412, 824$

l) $244 - 1, 2, 4, 61, 122, 244$

3. a)
$$\begin{array}{r|l} 609 & 3 \\ \hline 203 & 7 \\ 29 & 29 \\ 1 & \\ \hline \end{array}$$

 $609 = 3 \times 7 \times 29$

b)
$$\begin{array}{r|l} 858 & 2 \\ \hline 429 & 3 \\ 143 & 11 \\ 13 & 13 \\ 1 & \\ \hline \end{array}$$

 $858 = 2 \times 3 \times 11 \times 13$

c)
$$\begin{array}{r|l} 232 & 2 \\ \hline 116 & 2 \\ 58 & 2 \\ 29 & 29 \\ 1 & \\ \hline \end{array}$$

 $232 = 2 \times 2 \times 2 \times 29$

d)
$$\begin{array}{r|l} 975 & 5 \\ \hline 195 & 5 \\ 39 & 3 \\ 13 & 13 \\ 1 & \\ \hline \end{array}$$

 $975 = 5 \times 5 \times 3 \times 13$

e)
$$\begin{array}{r|l} 836 & 2 \\ \hline 418 & 2 \\ 209 & 11 \\ 19 & 19 \\ 1 & \\ \hline \end{array}$$

 $836 = 2 \times 2 \times 11 \times 19$

f)
$$\begin{array}{r|l} 370 & 2 \\ \hline 185 & 5 \\ 37 & 37 \\ 1 & \\ \hline \end{array}$$

 $370 = 2 \times 5 \times 37$

g)
$$\begin{array}{r|l} 313 & 313 \\ \hline 1 & \\ \hline \end{array}$$

 $313 = 1 \times 313$

h)
$$\begin{array}{r|l} 722 & 2 \\ \hline 361 & 19 \\ 19 & 19 \\ 1 & \\ \hline \end{array}$$

 $722 = 2 \times 19 \times 19$

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

 $72 = 2 \times 2 \times 2 \times 3 \times 3$

j)
$$\begin{array}{r|l} 287 & 7 \\ \hline 41 & 41 \\ 1 & \\ \hline \end{array}$$

 $287 = 7 \times 41$

k)
$$\begin{array}{r|l} 253 & 11 \\ \hline 23 & 23 \\ 1 & \\ \hline \end{array}$$

 $253 = 11 \times 23$

l)
$$\begin{array}{r|l} 529 & 23 \\ \hline 23 & 23 \\ 1 & \\ \hline \end{array}$$

 $529 = 23 \times 23$

4. a) $609 = 3 \times 7 \times 29$
 $406 = 2 \times 7 \times 29$
HCF = $7 \times 29 = 203$
LCM = $2 \times 3 \times 7 \times 29$
= 1 218

b) $965 = 5 \times 193$
 $579 = 3 \times 193$
HCF = 193
LCM = $3 \times 5 \times 193$
= 2 895

c) $832 = 2^6 \times 13$
 $520 = 2^3 \times 5 \times 13$
HCF = $2 \times 2 \times 2 \times 13 = 104$
LCM = $2^6 \times 5 \times 13$
= 4 160

d) $812 = 2 \times 2 \times 7 \times 29$
 $840 = 2 \times 2 \times 2 \times 3 \times 5 \times 7$
HCF = $2 \times 2 \times 7 = 28$
LCM = $2 \times 2 \times 2 \times 7 \times 29 \times 3 \times 5$
= 24 360

e) $783 = 3 \times 3 \times 3 \times 29$
 $522 = 2 \times 3 \times 3 \times 29$
HCF = $3 \times 3 \times 29 = 261$
LCM = $2 \times 3 \times 3 \times 3 \times 29$
= 1 566

f) $264 = 2 \times 2 \times 2 \times 3 \times 11$
 $660 = 2 \times 2 \times 3 \times 5 \times 11$
HCF = $2 \times 2 \times 3 \times 11 = 132$
LCM = $2 \times 2 \times 2 \times 3 \times 5 \times 11$
= 1 320

g) $378 = 2 \times 3 \times 3 \times 3 \times 7$
 $462 = 2 \times 3 \times 7 \times 11$
HCF = $2 \times 3 \times 7 = 42$
LCM = $2 \times 3 \times 3 \times 3 \times 7 \times 11$
= 4 158

h) $574 = 2 \times 7 \times 41$
 $492 = 2 \times 2 \times 3 \times 41$
HCF = $2 \times 41 = 82$
LCM = $2 \times 2 \times 3 \times 7 \times 41$
= 3 444

i) $160 = 2 \times 2 \times 2 \times 2 \times 2 \times 5$
 $120 = 2 \times 2 \times 2 \times 3 \times 5$
HCF = $2 \times 2 \times 2 \times 5 = 40$
LCM = $2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 5$
= 480

j) $889 = 7 \times 127$
 $762 = 2 \times 3 \times 127$
HCF = 127
LCM = $2 \times 3 \times 7 \times 127$
= 5 334

k) $99 = 3 \times 3 \times 11$
 $165 = 3 \times 5 \times 11$
 $\text{HCF} = 3 \times 11 = 33$
 $\text{LCM} = 3 \times 3 \times 5 \times 11$
 $= 495$

l) $986 = 2 \times 17 \times 29$
 $510 = 2 \times 3 \times 5 \times 17$
 $\text{HCF} = 2 \times 17 = 34$
 $\text{LCM} = 2 \times 3 \times 5 \times 17 \times 29$
 $= 14\,790$