

$$\begin{array}{r} 1) \quad + 3A \\ \quad \quad 25 \\ \hline \quad \quad B2 \end{array} = A=7 \text{ as } 7+5=12. \text{ We want 2 at units place and 1 is carry over. Now } 3+2+1=6. B=6$$

$$= \begin{array}{r} + 37 \\ \quad 25 \\ \hline \quad 62 \end{array}$$

$$2) \quad \begin{array}{r} 98 \\ + 4A \\ \hline CB3 \end{array} = A=5 \text{ as } 8+5=13. \text{ We want 3 at units place and 1 is carry over. Now } 9+4+1=14. CB=14$$

$$= \begin{array}{r} \cancel{98} \\ + 45 \\ \hline 143 \end{array}$$

$$3) \quad \begin{array}{r} + A1 \\ \quad 1B \\ \hline \quad B0 \end{array} = B=9 \text{ as } 1+9=10. \text{ We want 0 at units place and 1 is carry over. } A=7 \text{ as } 1+7+1=9$$

$$= \begin{array}{r} + 81 \\ \quad 19 \\ \hline \quad 90 \end{array}$$

$$4) \quad \begin{array}{r} + 2AB \\ \quad AB1 \\ \hline \quad B18 \end{array} = B=7 \text{ as } 1+7=8. \text{ We want 8 at units place and } A=4 \text{ as } 7+4=11. \text{ We want 1 at tens place and 1 is carry over. } 2+1+4=7$$

$$= \begin{array}{r} + 247 \\ \quad 471 \\ \hline \quad 718 \end{array}$$

$$\begin{array}{r} 5) \ 12A \\ + \ 6AB \\ \hline A09 \end{array}$$

$$= A=8 \quad B=1 \quad 1+6+1=8$$

$$2+A=10 \quad 8+B=9$$

$$\begin{array}{r} = \ 1288 \\ + \ 6881 \\ \hline 809 \end{array}$$

$$\begin{array}{r} 6) \ 1A \\ \times \ A \\ \hline 9A \end{array}$$

$$= 6 \times 6 = 36$$

$$= A=6$$

$$\begin{array}{r} \times 16 \\ \ 6 \\ \hline 96 \end{array}$$

$$\begin{array}{r} 7) \ AB \\ \times \ 6 \\ \hline BBB \end{array}$$

~~$$= B \times 6 = 61 \quad (\text{not a multiple of } 6)$$

$$= 6 \times 6 = 36$$

$$= A \times 6 + 3 = 66$$

$$= 6A$$~~

$$= B \times 6 = 6 \times 4 = 24 \quad A=7$$

$$6A + 2 = 44$$

$$B=4$$

$$6A = 44 - 2 = 42$$

$$A = \frac{42}{6} = 7$$

~~$$\begin{array}{r} 74 \\ \times 6 \\ \hline 444 \end{array}$$~~

$$\begin{array}{r} 8) \ AB \\ \times \ 3 \\ \hline CAB \end{array}$$

$$= B=0$$

$$3 \times 0 = 0$$

$$3A = CA$$

$$3 \times 5 = 15$$

~~$$\begin{array}{r} 15 \\ \times 3 \\ \hline 45 \end{array}$$~~

$$= 50$$

$$\times 3$$

$$\hline 150$$

$$\begin{array}{r} 9) \ AB \\ \times \ 5 \\ \hline CAB \end{array}$$

$$= B=0$$

$$5A = CA$$

$$5 \times 5 = 25$$

$$A=5$$

$$C=2$$

$$= 50$$

$$\times 5$$

$$\hline 250$$

$$\begin{array}{r}
 10) \ 8A5 \\
 + \ 94A \\
 \hline
 1A33
 \end{array}$$

$$= 5 + 8 = 13$$

$$A = 8$$

$$A + 4 + 1 = 13$$

$$A + 5 = 13$$

$$A = 13 - 5 - 8$$

$$= 885$$

$$\underline{948}$$

$$1833$$

$$\begin{array}{r}
 11) \ 6AB5 \\
 + \ D58C \\
 \hline
 9351
 \end{array}$$

$$= C = 6$$

$$5 + 6 = 11$$

$$8 + 1 + B = 15$$

$$9 + B = 15$$

$$B = 15 - 9 = 6$$

$$B = 6$$

$$= 6765$$

$$+ \ 2586$$

$$\underline{9351}$$

$$A + 5 + 1 = 13$$

$$A + 6 = 13$$

$$A = 13 - 6 = 7$$

$$1 + 6 + D = 9$$

$$7 + D = 9$$

$$D = 9 - 7$$

$$D = 2$$