

33, 34, 40, 44

33. a. 16  
b. 32  
c. 64  
d. 128

34. a.  $X + Y$

$28 - 29 = -1$

b.  $X + W$

$28 + 17 = 45$

c.  $Z + W$

$-13 + 17 = 4$

d.  $Y + Z$

$-29 - 13 = -22$

e.  $W - Z$

$17 + 13 = 30$

f.  $X - W$

$28 - 17 = 11$

g.  $Y - W$

$-29 - 17 = -46$

h.  $Z - Y$

$-13 + 29 = 16$

40. a.  $A + B$

$$\begin{array}{r} 11111110 \\ + 20000010 \\ \hline 100000000 \end{array}$$

b.  $11111110$

$-00000010$

$11111100$

c.  $00000010$

$-11111110$

$100000100$

d.  $-13$

$\text{not}(00000010) + 1$

$11111101$

$+ 1$

$11111110$

e.  $-(-A)$

$-(\text{not}(11111110) + 1)$

$-(00000001 + 1)$

$00000001$

$+ 1$

$00000010$

$-00000010$

$11111101$

$+ 1$

$11111110$

44. a.  $0.5 \cdot 2 = 1$

$0.10000$

b.  $0.26 \cdot 2 = 0.52$

$0.01000$

$0.52 \cdot 2 = 1.04$

$0.04 \cdot 2 = 0.08$

$0.08 \cdot 2 = 0.16$

$0.16 \cdot 2 = 0.32$

$0.32 \cdot 2 = 0.64$

c.  $0.10 \cdot 2 = 0.20$

$0.00011$

$0.20 \cdot 2 = 0.40$

$0.40 \cdot 2 = 0.80$

$0.8 \cdot 2 = 1.6$

$0.6 \cdot 2 = 1.2$

$0.2 \cdot 2 = 0.4$