

B. 10	B. 2	B. 8	B. 16
0.25	.01	0.2	0.4
0.328125	0.101010	0.25	.54
0.14453125	0.00100101	0.112	0.25
0.8125	0.1101	0.64	0.D

$$.123_{10} = 1 \times 10^{-1} + 2 \times 10^{-2} + 3 \times 10^{-3}$$

$$0.25_{10} = 2 \times 10^{-1} + 5 \times 10^{-2}$$

$$0.1101$$

84  
13

$$2 \sqrt{25}$$

74  
03

$$2 \sqrt{12}$$

310

$$2 \sqrt{6}$$

310

$$2 \sqrt{3}$$

111

$$2 \sqrt{1}$$

011 10

$$.011001_2$$

3 1 8

$$.011001$$

1 9

$$2 \sqrt{15}$$

711

$$2 \sqrt{30}$$

1510

$$2 \sqrt{15}$$

711

$$2 \sqrt{3}$$

111

$$2 \sqrt{1}$$

011 10

$$.0111011_2$$

1 7 3 8

$$.0111011$$

7 11 16 7B

$$2 \sqrt{123}$$

61  
-12  
03

$$2 \sqrt{61}$$

3011  
-6  
01

$$2 \sqrt{3}$$

111

$$2 \sqrt{1}$$

011 10

$$.0111011$$

6432118 21

$$96+16+8+3$$

112+8  
120+3

$$123$$

6432118

$$0.25_{10} = 2 \times 10^{-1} + 5 \times 10^{-2}$$

$$\begin{array}{r} 0.25 \\ 8 \overline{) 0.25} \\ \underline{24} \\ 10 \\ \underline{8} \\ 20 \\ \underline{16} \\ 4 \end{array}$$

$$\begin{aligned} 0.25_8 &= 2 \times 8^{-1} + 5 \times 8^{-2} \\ &= (2 \times 1/8) + (5 \times 1/64) \\ &= \frac{1}{4} + 0.078125 = 0.328125_{10} \end{aligned}$$

$$\begin{aligned} 11_8 &= 1 \times 8^1 + 1 \times 8^0 \\ &= 8 + 1 = 9_{10} \end{aligned}$$

$$0.25_{10} = 2 \times 10^{-1} + 5 \times 10^{-2}$$

$$\begin{array}{r} 0.01 \\ 1_8 \\ 1 \times 8^0 = 1 \end{array}$$

$$\begin{array}{r} 0.125 \\ 2 \overline{) 0.25} \\ \underline{20} \\ 5 \\ \underline{4} \\ 1 \end{array}$$

$$0.25_{10} = 0.1_2$$

$$\begin{array}{r} 0.01_2 = \\ 2^0 2^1 2^2 \\ \frac{1}{25} = 0.25 \end{array}$$

$$\begin{array}{r} 0.01_2 \\ 1_8 \\ 1 \times 8 \end{array}$$

$$0.25 \times 8 = 2.0$$

$$0.25_8 = 0.2_8$$

$$0.25_{10} \times 16 = 4.0$$

$$0.25_{10} = 0.4_{16}$$

$$\begin{array}{r} 0.0610 \\ 2 \overline{) 0.12} \\ \underline{10} \\ 2 \\ \underline{2} \\ 0 \end{array}$$

$$\begin{aligned} 0.1101_2 &= 2^{-1} + 2^{-2} + 2^{-4} \\ &= \frac{1}{2} + \frac{1}{4} + \frac{1}{16} = 0.8125_{10} \end{aligned}$$

$$0.25_8 = 2 \times 8^{-1} + 6 \times 8^{-2}$$

$$5 \times 1/64 = 5/64 = 0.078125$$

$$2 \times 1/8 = 2/8 = 1/4 = 0.25$$

$$0.328125_{10}$$

$$0.32815_{10} \rightarrow 0.101010_2$$

$$\frac{.101010_2}{2 \cdot 10_{16}}$$

$.32815 \times 2 = 0.65625$	0
$.65625 \times 2 = 1.3125$	1
$.3125 \times 2 = 0.625$	0
$.625 \times 2 = 1.25$	1
$.25 \times 2 = 0.5$	0
$.5 \times 2 = 1.0$	1
<del><math>0.0 \times 2 = 0.0</math></del>	<del>0</del>

$$2 \cdot 16^{-1} + 10 \cdot 16^{-2}$$

$$.328125 \times 16 = 5.25$$

$.8125_{10} \times 8 =$	6	0.5
$.5 \times 8 =$	4	0

$.25 \times 16 =$	5	.25
	4	.0

$$0.54_{16}$$

$$0.8125_{10} = 0.64_8$$



$$0.8125 \times 16 = 13 \text{ } 0$$

$$.8125_{10} = 0.D_{16}$$

$$0.25_{16} = 2 \times 16^{-1} + 5 \times 16^{-2} = 0.14453125_{10} = 0.00100101_2$$

$$\frac{2}{16} = \frac{1}{8} = 0.125$$

$$\frac{5}{256} = 0.01953125$$

$$\begin{array}{rcl} 0.14453125 \times 2 & = & 0 \text{ } .2890625 \\ 0.2890625 \times 2 & = & 0 \text{ } .578125 \\ 0.578125 \times 2 & = & 1 \text{ } .15625 \\ 0.15625 \times 2 & = & 0 \text{ } .3125 \\ 0.3125 \times 2 & = & 0 \text{ } .625 \\ 0.625 \times 2 & = & 1 \text{ } .25 \\ .25 \times 2 & = & 0 \text{ } .5 \\ .5 \times 2 & = & 1 \text{ } .0 \end{array}$$

$$\begin{array}{rcl} 0.14453125 \times 8 & = & 1 \text{ } .15625 \\ 0.15625 \times 8 & = & 1 \text{ } .25 \\ .25 \times 8 & = & 2 \text{ } 0 \end{array}$$

$$0.112_{16}$$