

(Chapter 1)

1. a) $D_0 = \frac{1}{2} \cdot 100\% = 50\%$

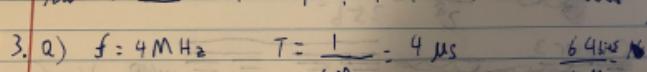
D₁ = $\frac{2}{4} \cdot 100\% = 50\%$

D₂ = $\frac{4}{8} \cdot 100\% = 50\%$

D₃ = $\frac{8}{16} \cdot 100\% = 50\%$

b) D₀ = 0101010101010101 D₁ = 0011001100110011

D₂ = 0000111100001111 D₃ = 0000000011111111



3. a) f = 4 MHz T = $\frac{1}{4 \text{ MHz}} = 4 \mu\text{s}$ $\frac{64 \text{ bits}}{4 \mu\text{s}} = 16 \text{ Megabits per second}$

b) ~~$\frac{64 \text{ bits}}{4 \cdot 4 \text{ Ns}}$~~ = $\frac{64 \text{ bits}}{4 \text{ Ns}} = 16 \text{ megabits per second}$

(Chapter 2)

1. a) 1024 → 10000000000

b) 1011101110111011

c) 1000000000000 = 2048 50

1111000000000000 = 2048 16 bits

2. a) $65535/16 = 4095.9375 \cdot 16 = 15 = F$

$\frac{255.9375}{16} = 15 = F$ so \boxed{FFFF}

$\frac{15.9375}{16} = 15 = F$

$\frac{15.9375}{16} = 15 = F$

5) 1000.8; $\boxed{P888}$

T = 1788.8 = 0

3. $\frac{1024}{16} = 64$ $\frac{64}{8} = 8$ $\frac{8}{8} = 1$ $\frac{1}{16} = 0$ $\frac{0}{8} = 0$

$\frac{4}{8} = 2$, $\frac{2}{8} = 0$ $\frac{0}{8} = 0$

$\frac{4}{8} = 2$, $\frac{2}{8} = 0$ $\frac{0}{8} = 0$ $\boxed{2000}$

4. a) 8

b) 1100

c) $\frac{360}{16} = 22.5$

d) $\frac{360}{28} = 12.5$

e) $\frac{360}{28} = 12.5$

f) $\frac{360}{28} = 12.5$

g) $\frac{360}{28} = 12.5$

h) $\frac{360}{28} = 12.5$

i) $\frac{360}{28} = 12.5$

j) $\frac{360}{28} = 12.5$

k) $\frac{360}{28} = 12.5$

l) $\frac{360}{28} = 12.5$

m) $\frac{360}{28} = 12.5$

n) $\frac{360}{28} = 12.5$

o) $\frac{360}{28} = 12.5$

p) $\frac{360}{28} = 12.5$

q) $\frac{360}{28} = 12.5$

r) $\frac{360}{28} = 12.5$

s) $\frac{360}{28} = 12.5$

t) $\frac{360}{28} = 12.5$

u) $\frac{360}{28} = 12.5$

v) $\frac{360}{28} = 12.5$

w) $\frac{360}{28} = 12.5$

x) $\frac{360}{28} = 12.5$

y) $\frac{360}{28} = 12.5$

z) $\frac{360}{28} = 12.5$

aa) $\frac{360}{28} = 12.5$

bb) $\frac{360}{28} = 12.5$

cc) $\frac{360}{28} = 12.5$

dd) $\frac{360}{28} = 12.5$

ee) $\frac{360}{28} = 12.5$

ff) $\frac{360}{28} = 12.5$

gg) $\frac{360}{28} = 12.5$

hh) $\frac{360}{28} = 12.5$

ii) $\frac{360}{28} = 12.5$

jj) $\frac{360}{28} = 12.5$

kk) $\frac{360}{28} = 12.5$

ll) $\frac{360}{28} = 12.5$

mm) $\frac{360}{28} = 12.5$

nn) $\frac{360}{28} = 12.5$

oo) $\frac{360}{28} = 12.5$

pp) $\frac{360}{28} = 12.5$

qq) $\frac{360}{28} = 12.5$

rr) $\frac{360}{28} = 12.5$

ss) $\frac{360}{28} = 12.5$

tt) $\frac{360}{28} = 12.5$

uu) $\frac{360}{28} = 12.5$

vv) $\frac{360}{28} = 12.5$

ww) $\frac{360}{28} = 12.5$

xx) $\frac{360}{28} = 12.5$

yy) $\frac{360}{28} = 12.5$

zz) $\frac{360}{28} = 12.5$

aa) $\frac{360}{28} = 12.5$

bb) $\frac{360}{28} = 12.5$

cc) $\frac{360}{28} = 12.5$

dd) $\frac{360}{28} = 12.5$

ee) $\frac{360}{28} = 12.5$

ff) $\frac{360}{28} = 12.5$

gg) $\frac{360}{28} = 12.5$

hh) $\frac{360}{28} = 12.5$

ii) $\frac{360}{28} = 12.5$

jj) $\frac{360}{28} = 12.5$

kk) $\frac{360}{28} = 12.5$

ll) $\frac{360}{28} = 12.5$

mm) $\frac{360}{28} = 12.5$

nn) $\frac{360}{28} = 12.5$

oo) $\frac{360}{28} = 12.5$

pp) $\frac{360}{28} = 12.5$

qq) $\frac{360}{28} = 12.5$

rr) $\frac{360}{28} = 12.5$

ss) $\frac{360}{28} = 12.5$

tt) $\frac{360}{28} = 12.5$

uu) $\frac{360}{28} = 12.5$

vv) $\frac{360}{28} = 12.5$

ww) $\frac{360}{28} = 12.5$

xx) $\frac{360}{28} = 12.5$

yy) $\frac{360}{28} = 12.5$

zz) $\frac{360}{28} = 12.5$

aa) $\frac{360}{28} = 12.5$

bb) $\frac{360}{28} = 12.5$

cc) $\frac{360}{28} = 12.5$

dd) $\frac{360}{28} = 12.5$

ee) $\frac{360}{28} = 12.5$

ff) $\frac{360}{28} = 12.5$

gg) $\frac{360}{28} = 12.5$

hh) $\frac{360}{28} = 12.5$

ii) $\frac{360}{28} = 12.5$

jj) $\frac{360}{28} = 12.5$

kk) $\frac{360}{28} = 12.5$

ll) $\frac{360}{28} = 12.5$

mm) $\frac{360}{28} = 12.5$

nn) $\frac{360}{28} = 12.5$

oo) $\frac{360}{28} = 12.5$

pp) $\frac{360}{28} = 12.5$

qq) $\frac{360}{28} = 12.5$

rr) $\frac{360}{28} = 12.5$

ss) $\frac{360}{28} = 12.5$

tt) $\frac{360}{28} = 12.5$

uu) $\frac{360}{28} = 12.5$

vv) $\frac{360}{28} = 12.5$

ww) $\frac{360}{28} = 12.5$

xx) $\frac{360}{28} = 12.5$

yy) $\frac{360}{28} = 12.5$

zz) $\frac{360}{28} = 12.5$

aa) $\frac{360}{28} = 12.5$

bb) $\frac{360}{28} = 12.5$

cc) $\frac{360}{28} = 12.5$

dd) $\frac{360}{28} = 12.5$

ee) $\frac{360}{28} = 12.5$

ff) $\frac{360}{28} = 12.5$

gg) $\frac{360}{28} = 12.5$

hh) $\frac{360}{28} = 12.5$

ii) $\frac{360}{28} = 12.5$

jj) $\frac{360}{28} = 12.5$

kk) $\frac{360}{28} = 12.5$

ll) $\frac{360}{28} = 12.5$

mm) $\frac{360}{28} = 12.5$

nn) $\frac{360}{28} = 12.5$

oo) $\frac{360}{28} = 12.5$

pp) $\frac{360}{28} = 12.5$

qq) $\frac{360}{28} = 12.5$

rr) $\frac{360}{28} = 12.5$

ss) $\frac{360}{28} = 12.5$

tt) $\frac{360}{28} = 12.5$

uu) $\frac{360}{28} = 12.5$

vv) $\frac{360}{28} = 12.5$

ww) $\frac{360}{28} = 12.5$

xx) $\frac{360}{28} = 12.5$

yy) $\frac{360}{28} = 12.5$

zz) $\frac{360}{28} = 12.5$

aa) $\frac{360}{28} = 12.5$

bb) $\frac{360}{28} = 12.5$

cc) $\frac{360}{28} = 12.5$

dd) $\frac{360}{28} = 12.5$

ee) $\frac{360}{28} = 12.5$

ff) $\frac{360}{28} = 12.5$

gg) $\frac{360}{28} = 12.5$

hh) $\frac{360}{28} = 12.5$

ii) $\frac{360}{28} = 12.5$

jj) $\frac{360}{28} = 12.5$

kk) $\frac{360}{28} = 12.5$

ll) $\frac{360}{28} = 12.5$

mm) $\frac{360}{28} = 12.5$

nn) $\frac{360}{28} = 12.5$

oo) $\frac{360}{28} = 12.5$

pp) $\frac{360}{28} = 12.5$

qq) $\frac{360}{28} = 12.5$

rr) $\frac{360}{28} = 12.5$

ss) $\frac{360}{28} = 12.5$

tt) $\frac{360}{28} = 12.5$

uu) $\frac{360}{28} = 12.5$

vv) $\frac{360}{28} = 12.5$

ww) $\frac{360}{28} = 12.5$

xx) $\frac{360}{28} = 12.5$

yy) $\frac{360}{28} = 12.5$

zz) $\frac{360}{28} = 12.5$

aa) $\frac{360}{28} = 12.5$

bb) $\frac{360}{28} = 12.5$

cc) $\frac{360}{28} = 12.5$

dd) $\frac{360}{28} = 12.5$

ee) $\frac{360}{28} = 12.5$

ff) $\frac{360}{28} = 12.5$

gg) $\frac{360}{28} = 12.5$

hh) $\frac{360}{28} = 12.5$

ii) $\frac{360}{28} = 12.5$

jj) $\frac{360}{28} = 12.5$

kk) $\frac{360}{28} = 12.5$

ll) $\frac{360}{28} = 12.5$

mm) $\frac{360}{28} = 12.5$

nn) $\frac{360}{28} = 12.5$

oo) $\frac{360}{28} = 12.5$

pp) $\frac{360}{28} = 12.5$

qq) $\frac{360}{28} = 12.5$

rr) $\frac{360}{28} =$

