

1) $y \cdot x$
 $3(6) = k$
 $k = 18$
 $\frac{18x}{18} = \frac{18}{18}$
 $x = 1$

2) $z \cdot r = k$
 $32(1.5) = 48 = k$
 $\frac{8r}{8} = \frac{48}{8}$
 $r = 6$

~~3) $w \cdot v = k$
 $3(6) = k$
 $w(3) = 3(6)$
 $w = 6$~~

3) $w \cdot u^2 = k$
 $3(6)^2 = 108 = k$
 $w(3)^2 = 108$
 $\frac{9w}{9} = \frac{108}{9}$
 $w = 12$

4) $p \cdot \sqrt{q} = k$
 $12\sqrt{36} = 72 = k$
 $p\sqrt{16} = 72$
 $4p = 72$
 $p = 18$

5) $z = k \cdot x \cdot y$
 $18 = k(0.4)(3)$
 $k = \frac{18}{3(0.4)} = 15$
 $z = 15(1.2)(2)$
 $z = 36$

6) $w = k \cdot u \cdot v$
 $\frac{24}{0.8(5)} = \frac{k(0.8)(5)}{0.8(5)}$
 $k = 6$
 ~~$w = k(u)(v)$~~
 $18 = 6(2)v$
 $\frac{18}{12} = \frac{12v}{12}$
 $v = 1.5$

1) $f \cdot w$
 $1200(250) = k = 300000$
 $f = \frac{300000}{400} = 750 \text{ Hz}$

2) $5(24) = 120 = k$
 $r = \frac{120}{8} = 15 \Omega$

3) $l = k \cdot A \cdot d$
 $720 = k(3)(15)$
 $k = 16$

4) $c = \frac{k \cdot d^2}{l}$
 $0.12 = \frac{k(2)^2}{50}$
 $k = 1.5$
 $c = \frac{(1.5)(2.5)^2}{75}$
 $= 0.125 \text{ mho}$

$l = 16(4.5)(12)$
 $= 864 \text{ BTU}$