what I know

1. $S = \frac{k}{m}$
2. $N = kET$
3. $M = \frac{kwd}{Tx}$
4. $R = \frac{kb}{e}$
5. $A = klw$
6. $C = kn$
7. $I = kN$
8. $V = khr^2$
9. $T = \frac{k}{s}$
10. $C = klw$

What's in

1. $y = kx$

$36 = k4$

$\frac{4}{}$

$\boxed{k = 9}$

2. $m = \frac{k}{n}$

$-3\left(12 = \frac{k}{-3}\right)$

$k = -36$

3. $N = kBC$

$30 = k(2)(3)$

$\frac{30}{6} = \frac{6k}{6}$

$\boxed{5 = k}$

4. $J = krC$

$24 = k(3)(-8)$

$\frac{24}{-24} = \frac{-24k}{-24}$

$\boxed{-1 = k}$

5. $x = \frac{ky^2}{z}$

$36 = \frac{k(-12)^2}{3}$

$3\left(36 = \frac{k(144)}{3}\right)$

$108 = 144k$

$\frac{108}{144} = \frac{144k}{144}$

$\boxed{k = \frac{3}{4}}$

What's More

1. $m = kn$

$\frac{28 = k(2)}{2}$

$k = 14$

$\boxed{m = 14n}$

2. $x = ky$

$\frac{-4 = k(-2)}{-2}$

$k = 2$

$\boxed{x = 2y}$

3. $y = \frac{k}{x}$

$6\left(5 = \frac{k}{6}\right)$

$k = 30$

$\boxed{y = \frac{30}{x}}$

4. $R = kBN$

$3 = k(-2)(7)$

$\frac{3 = -14k}{-14}$

$k = \frac{-3}{14}$

$\boxed{R = \frac{-3}{14} BN}$

5. $y = \frac{kx}{z}$

$\frac{10 = k(15)}{15}$

$k = \frac{2}{3}$

$\boxed{y = \frac{2x}{3z}}$

What I can Do

1. $y = kx$ → $y = (4)(2)$

$\frac{2 = k(3)}{3}$ → $\boxed{y = 8}$

$k = 4$

2. $x = \frac{k}{y}$ → $\left(-1 = \frac{-36}{y}\right) y$

$-3\left(12 = \frac{k}{-3}\right)$ → $-(-y = -36)$

$k = -36$ → $\boxed{y = 36}$

3. $C = kBA$ → $-15 = 5(B)(3)$

$30 = k(2)(3)$ → $\frac{-15 = 15kB}{15}$

$\frac{30 = 6k}{6}$ → $\boxed{B = -1}$

$k = 30$

4. $J = kvt$ → $J = 3/4\ (-2)(-1)$

$24 = k(4)(8)$ → $J = \frac{3}{4}(2)$

$\frac{24 = 32k}{32}$ → $J = \frac{6}{4}$

$k = \frac{3}{4}$ → $\boxed{J = \frac{3}{2}}$

5. $x = \frac{ky^2}{z}$ → $x = \frac{15(2)^2}{16\sqrt{4}}$

$5 = \frac{k(-4)^2}{\sqrt{9}}$ $x = \frac{15(4)}{16(3)}$

$3\left(5 = \frac{16k}{3}\right)$ $x = \frac{60}{32}$

$15 = 16k$ $\boxed{x = \frac{15}{8}}$

16

$k = \frac{15}{16}$

Assessment:

1. $y = kx^2$

$250 = k(60)^2$

$\frac{250 = k(3600)}{3600}$

$k = \frac{5}{72}$

$y = \frac{5(96)^2}{72}$

$y = \frac{5(9216)}{72}$

$y = \frac{46080}{72}$

$y = \boxed{640 \text{ feet}}$

2. $y = kx$

$\frac{300 = k(40)}{40}$

$k = \frac{25}{4}$

$4\left(65 = \frac{25x}{4}\right)$

$\frac{260 = 25x}{25}$

$\boxed{x = 10.4 \text{ or } \frac{52}{5} \text{ pounds}}$

3. $r = kav$

$225 = k(25)(40)$

$\frac{225}{1000} = \frac{k(1000)}{1000}$

$k = \frac{9}{40}$

$270 = \frac{9(40)v}{40}$

$40\left(270 = \frac{360v}{40}\right)$

$10800 = 360v$

$\frac{10800}{360} = \frac{360v}{360}$

$v =$ **30 miles per hour.**

Additional Activities

1. $z = kxy$

$15 = k(3)(5)$

$\frac{15}{15} = \frac{15k}{15}$

$k = 1$

$z = 1(6)(7)$

A. $z = 42$

2. $25 = k(5)(2)$

$\frac{25}{10} = \frac{10k}{10}$

$k = \frac{5}{2}$

$z = \frac{5(8)(5)}{2}$

$z = \frac{200}{2}$

R. $z = 100$

3. $198 = k(33)(9)$

$\frac{198}{297} = \frac{297k}{297}$

$k = \frac{198}{297} = \frac{2}{3}$

$z = \frac{2(25)(30)}{3}$

$z = \frac{1500}{3}$

T. $z = 500$

4. $1575 = k(35)(5)$

$\frac{1575}{175k} = \frac{175k}{175k}$

$k = 9$

$z = 9(3)(20)$

E. $\boxed{z = 540}$

5. $1.1 = k(55)(2)$

$\frac{1.1}{110} = \frac{110k}{110}$

$k = \frac{1.1}{110}$

$z = \frac{1.1(75)(3)}{110}$

$z = \frac{247.5}{110}$

Y. $\boxed{z = 2.25}$

A R T E R Y

1 2 3 4 2 5