1

1.4

1) Formulas

2) Applications

a) $2A = \frac{2}{2} h(a+b)$

$\frac{2A}{h} = \frac{h(a+b)}{h}$

$2A = h(a+b)$

$2A = ah + bh$

$-bh \qquad -bh$

$\frac{2A}{h} = a + b$

$\frac{2A}{h} - b = a$

$\frac{2A - bh}{h} = \frac{ah}{h}$

$\frac{2A - bh}{h} = a$

$\frac{2A}{h} - \frac{bh}{h}$

b) $A = 2\pi r^2 + 2\pi r h$ for h

$$\frac{A - 2\pi r^2}{2\pi r} = \frac{2 \cdot \pi \cdot r \cdot h}{2\pi \cdot r}$$

$$\frac{3 + 2}{2} = \frac{5}{2}$$

$$h = \frac{A - 2\pi r^2}{2\pi r} = \frac{A}{2\pi r} - \frac{2\pi r^2 \cdot r}{2\pi r \cdot 1}$$

$$= \frac{A}{2\pi r} - r$$

Applications

1) Geometry

2) Interest : $I = P \cdot r \cdot t$

3) Uniform Motion = $d = r \cdot t$

4) Mixture

6) other

(2)

	rate	· time	= distance
train	80	t	$80t$
bus	60	$31-t$	$60(31-t)$
		31	2300

equation

$80t + 60(31-t) = 2300$

$80t + 1860 - 60t = 2300$

$20t + 1860 = 2300$

$-1860 \quad -1860$

$20t = 440$

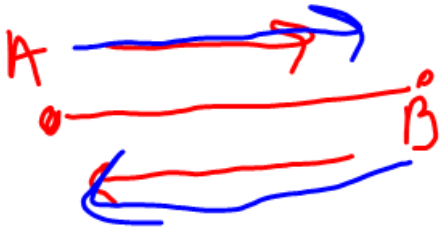
$\frac{20t}{20} = \frac{440}{20}$

$t = 22$

on the train for 22 hrs

(3)

	rate	time	distance
downstream	$s+1$ 6	t	same $6t$
upstream against stream	$s-1$ 4	$t+2$	$4(t+2)$



$$6t = 4t + 8$$
$$2t = 8$$
$$t = 4$$

distance is 24 miles

4

12%	+	60%	=	x
8 pints		2 pints		10 pints

$.12(8)$ $.60(2)$

$0.96 + 1.2 = 10x$

Pure Alc Pure Alc Pure Alc

$0.96 + 1.2 = 10x$

$\frac{2.16}{10} = \frac{10x}{10}$

$.216 = x$ → 21.6%