Garage Door Cases

1. House door opens
   all lights turn on

2. House door closes
   all lights go off in 2 minutes

3. Garage door opens
   all lights go on
   all lights go off in 5 minutes

4. Garage door closes
   all lights go on
   all lights go off in 5 minutes

5. Garage opener light button is pressed
   all lights go on
   all lights go off in 5 minutes

6. Wall switch is pressed off
   all lights go off

7. Wall switch is pressed on
   all lights go on

$A_r = 4/5$

$B_r = 5/4$

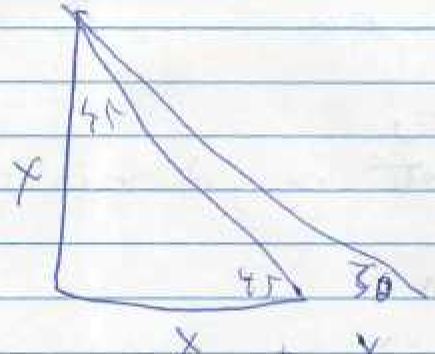
C_r

$4g \cdot 5 + 7b \cdot 5 = 4$

$7g \cdot 4 + 10b \cdot 4 = 5$

3.732) 42.400 → 5.7?9 ... 22.7

3.732) 84.800



$x + y$

$20g + 35b = 4$

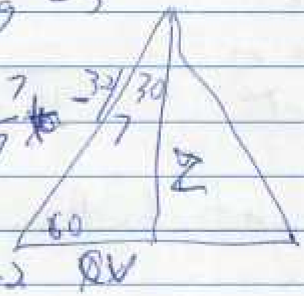
$28g + 40b = 5$

$28g + \frac{160}{35} - \frac{800}{35}g = 5$

$35b = 4 - 20g$

$b = \left(\frac{4}{35} - \frac{20}{35}g\right)$

$\frac{28 \cdot 7g}{7} - \frac{160g}{7} = \frac{5 \cdot 7}{7} - \frac{32}{7}$



$x^2 = \frac{x^2}{4} + y^2$

$y^2 = \frac{3}{4}x^2$

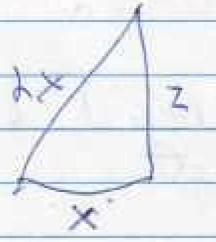
$y = \frac{\sqrt{3}}{2}x$

$(196 - 160)g = 35 - 32$

$\sqrt{3}x = x + y$

$(\sqrt{3} - 1)x = y$

$x = \frac{y}{\sqrt{3} - 1}$



$4x^2 = x^2 + z^2$

$3x^2 = z^2$

$\sqrt{3}x = z$

$36g = 3$

$g = 3/36 = 1/12$

$b = 4/35 - \frac{20}{35} \cdot \frac{1}{12}$

$x + y = \frac{\sqrt{3}}{2}x$

$y = \frac{\sqrt{3} + 2}{2}x$

$42.4 = \frac{\sqrt{3} + 2}{2}x$

$x = \frac{2}{\sqrt{3} + 2}y$

3.73) 84.80
846
2000
1965

$\frac{2 \cdot 42.4}{1.732 + 2} = \frac{84.8}{3.732}$