

6c

$Q_1 = 57.5$ $Q_2 = 67.5$ $Q_3 = 92.5$
 $[30, 45, 55, 60, 65, 65, 70, 75, 75, 110]$
 $[120, 125]$

6d

$\mu = a + 1$ $(a+1)^2$

$$\text{variance} = \left(\frac{(a-1)^2 + a^2 + (a+2)^2 + (a+3)^2}{4} \right) -$$

$$= \frac{a^2 - 2a + 1 + a^2 + a^2 + 4a + 4 + a^2 + 6a + 9}{4} - (a+1)^2$$

$$= a^2 + 2a + \frac{7}{2} - (a^2 + 2a + 1)$$

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

#2 (c) Each number is multiplied by 5.
Find the new mean + variance.

$$\mu = 5(a+1)$$

$$\sigma^2 = 5^2 \left(\frac{5}{2} \right)$$

5(d) Each number is multiplied by $k \neq 0$.
What is the new standard deviation?

$$|k| \sqrt{\frac{s}{2}}$$

Ex: 2, 4, 12

$$\text{variance} = \frac{2^2 + 4^2 + 12^2}{3} - (6)^2$$

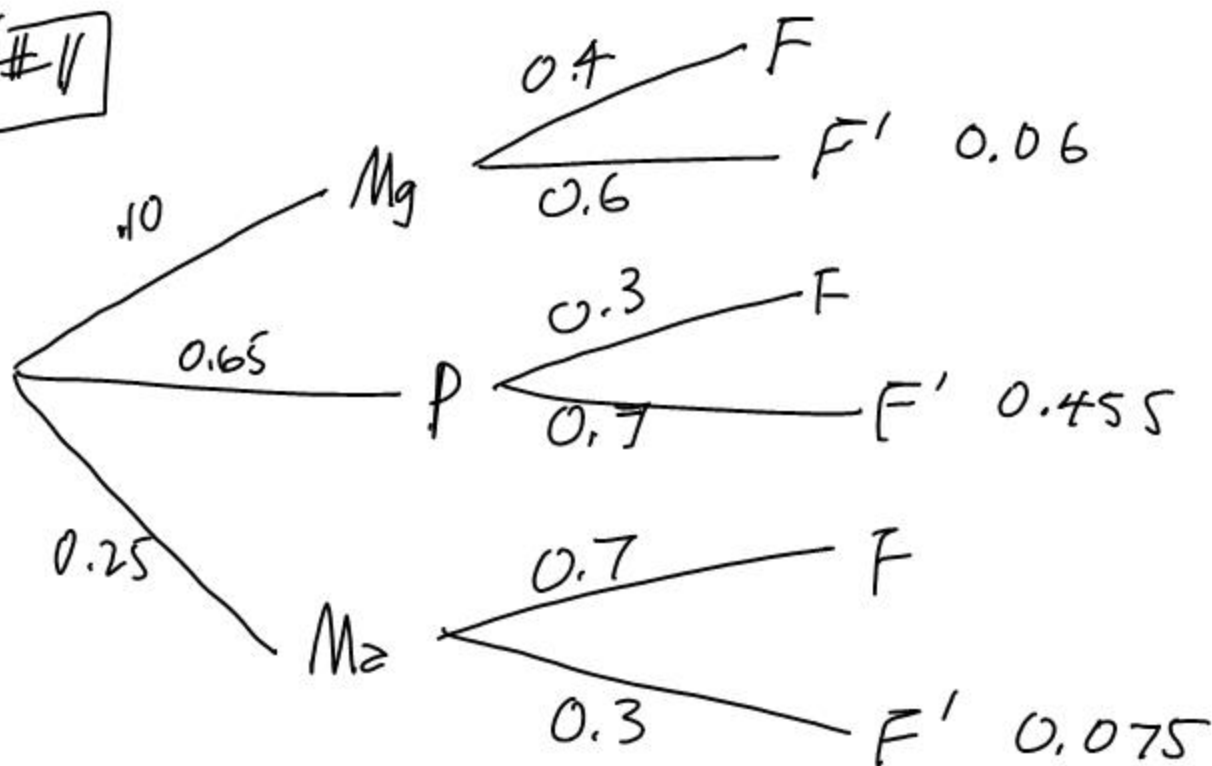
$$\frac{164}{3} - \frac{108}{3} = \frac{56}{3}$$

Ex: $3(2)$, $3(4)$, $3(12)$

$$\text{variance} = \frac{(\cancel{3}(2))^2 + (\cancel{3}(4))^2 + (\cancel{3}(12))^2}{3} - (3(6))^2$$

$$\textcircled{3^2} \left(\frac{2^2 + 4^2 + 12^2}{3} \right) - \textcircled{3^2} (6)^2$$

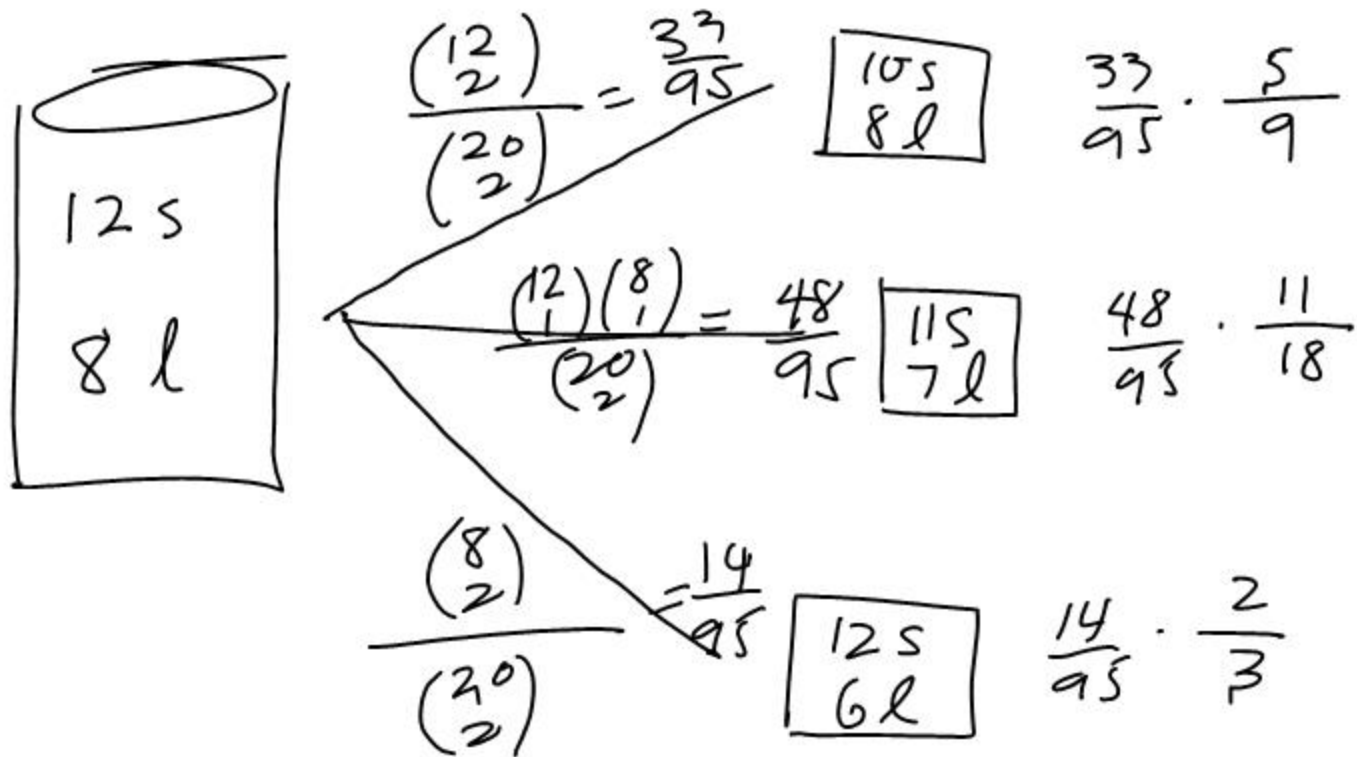
#11



$$(b) P(M_g|F') = \frac{P(M_g \cap F')}{P(F')} = \frac{0.06}{0.59}$$

$$(c) P(M_a|F) = \frac{0.075}{0.59} = \frac{6}{59}$$

#13



$$P(\text{teacher } 2L \mid \text{student } S) = \frac{P(\text{teacher } 2L \cap \text{student } S)}{P(\text{student } S)}$$

$$= \frac{\frac{14}{95} \cdot \frac{2}{3}}{3/5} = \frac{28}{171}$$

Chapter 6 Test

9/25 due: ~~today~~

9/27

10/1 TEST