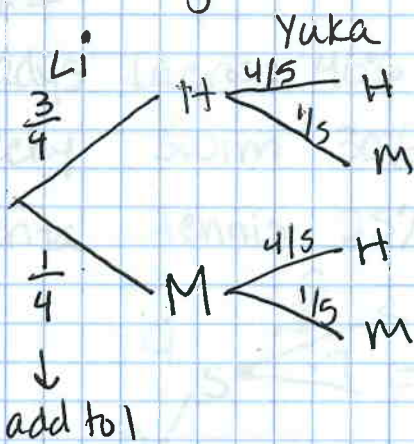


Tree Diagrams Day 2



Li $\frac{3}{4}$ hit
Yuka $\frac{4}{5}$ hit

Outcomes

H	H	$P(HH) = \frac{3}{4} \cdot \frac{4}{5} = \frac{12}{20}$
H	M	$P(HM) = \frac{3}{4} \cdot \frac{1}{5} = \frac{3}{20}$
M	H	$P(MH) = \frac{1}{4} \cdot \frac{4}{5} = \frac{4}{20}$
M	M	$P(MM) = \frac{1}{4} \cdot \frac{1}{5} = \frac{1}{20}$

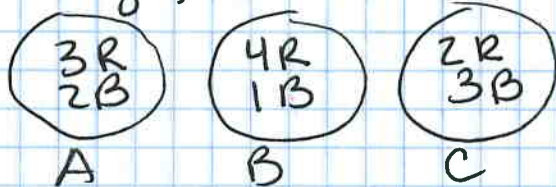
$$= \frac{20}{20} = 1$$

all outcomes

Multiply Probabilities for Multiple events

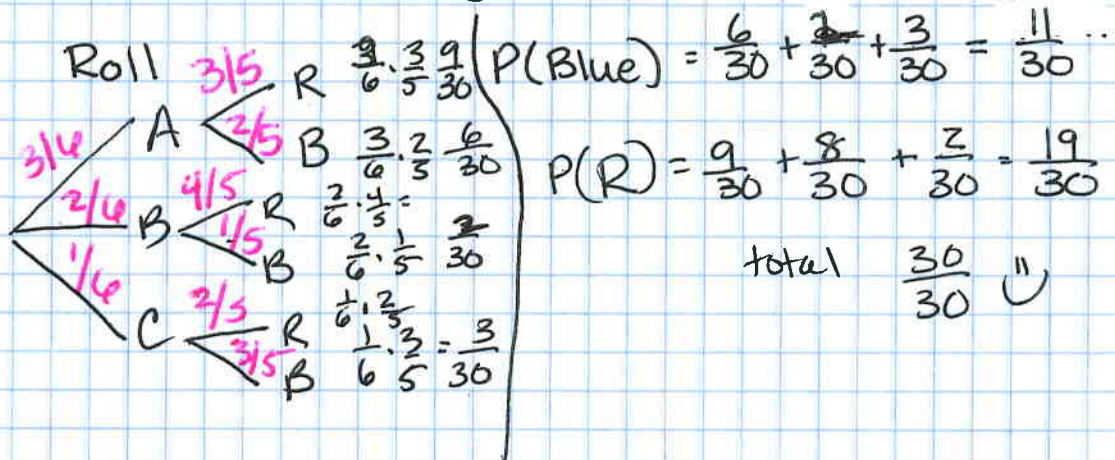
EX 1: Make a tree diagram & find the probabilities

3 bags, blue and red marbles



Dice Sides
3 - ~~Red~~ A
2 - B
1 - C

Roll dice, pick bag



$$P(\text{Blue}) = \frac{6}{30} + \frac{2}{30} + \frac{3}{30} = \frac{11}{30}$$

$$P(\text{R}) = \frac{9}{30} + \frac{8}{30} + \frac{2}{30} = \frac{19}{30}$$

total $\frac{30}{30}$ ☺

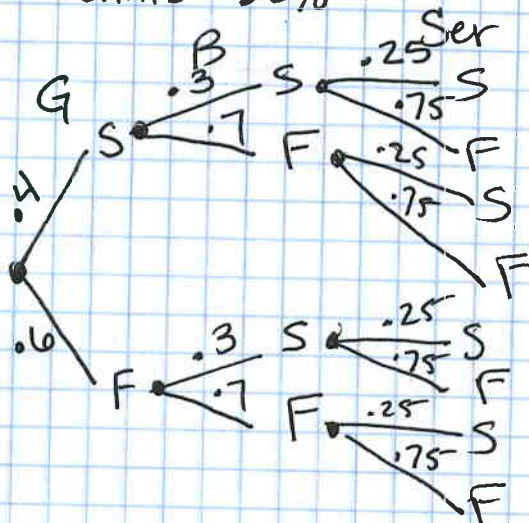
EX2

Gladys Lacross 40%

Becky Swim 30%

Serita tennis 25%

S = succeed
F = Fail



$$P(\text{all S}) = (.4)(.3)(.25) \\ 0.03 \text{ chance (3\%)}$$

$P(\text{one S})$

$$(.4)(.7)(.75) + (.6)(.3)(.75) \\ \text{Gladys S Gladys F} \\ + (.6)(.7)(.25)$$

$$.21 + .135 + .105$$

$$.450$$

$$\text{one success} = 45\%$$