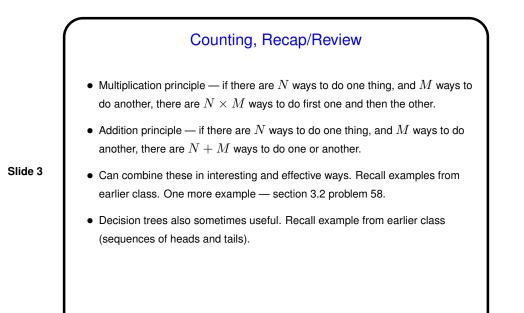


Slide 1



	Principle of Inclusion/Exclusion
	Motivating(?) example:
	You take a poll of how many people support propositions A and B. You find that 10 of them support A, 20 support B, and 5 support both A and B. How many support either A or B?
	• Using set notation, with $\left S\right $ meaning the number of elements in $S$ :
	Given $ A  = 10$ , $ B  = 20$ , and $ A \cap B  = 5$ ,
	what is $ A\cup B $ ?
	• We can use the addition principle to derive
	$ A\cup B = A + B - A\cap B $
	(Intuitive idea is that we count everything in both sets, and in doing that we count some things twice, so we must correct.)
l	Apply to example.

Slide 4

