Understanding Pointers & Arrays #1

Decl	A1 , A2			*A1 , *A2		
	Comp	Bad	Size	Comp	Bad	Size
`int A1[3]`			12			4
`int *A2`			8			4
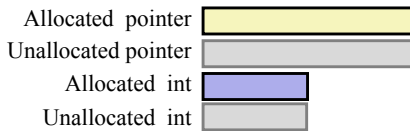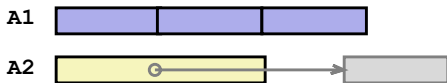
A1 □□□

A2 [○———→] □

Allocated pointer □
Unallocated pointer □
Allocated int □
Unallocated int □

- **Comp: Compiles (Y/N)**
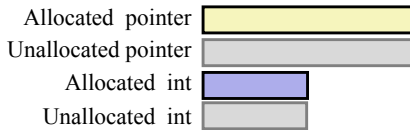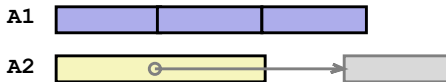- **Bad: Possible bad pointer reference (Y/N)**
- **Size: Value returned by `sizeof`**

Understanding Pointers & Arrays #1

Decl	A1 , A2			*A1 , *A2		
	Comp	Bad	Size	Comp	Bad	Size
`int A1[3]`	Y	N	12	Y	N	4
`int *A2`	Y	N	8	Y	Y	4

A1

A2

Allocated pointer
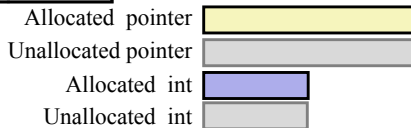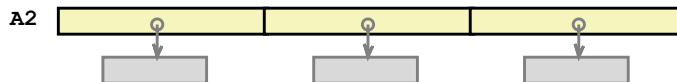Unallocated pointer
Allocated int
Unallocated int

- **Comp: Compiles (Y/N)**
- **Bad: Possible bad pointer reference (Y/N)**
- **Size: Value returned by `sizeof`**

Understanding Pointers & Arrays #2

Decl	An			*An			**An		
	Cmp	Bad	Size	Cmp	Bad	Size	Cmp	Bad	Size
`int A1[3]`			12			4		Y	
`int *A2[3]`			14			8		Y	
`int (*A3)[3]`			8			12			4

*A3 = A1

A1

A2

A3

Allocated pointer

Unallocated pointer

Allocated int

Unallocated int

Understanding Pointers & Arrays #2

Decl	An			*An			**An		
	Cmp	Bad	Size	Cmp	Bad	Size	Cmp	Bad	Size
`int A1[3]`	Y	N	12	Y	N	4	N	–	–
`int *A2[3]`	Y	N	24	Y	N	8	Y	Y	4
`int (*A3)[3]`	Y	N	8	Y	Y	12	Y	Y	4

Allocated pointer

Unallocated pointer

Allocated int

Unallocated int