

Recall: ++ for Variables

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++int_var

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int& pre_incr (int& a)
{
    a = a + 1;
    return a;
}
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Increment value of a.

Then return new value as l-value.

Recall: ++ for Variables

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`int_var++`

```
int& pre_incr (int& a)
{
    a = a + 1;
    return a;
}
```

```
int post_incr (int& a)
{
    int value = a;
    a = a + 1;
    return value;
}
```

Increment value of a.

Then return new value as l-value.

Recall: ++ for Variables

`++int_var`

```
int& pre_incr (int& a)
{
    a = a + 1;
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Increment value of a.
Then return **new** value as l-value.

`int_var++`

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int post_incr (int& a)
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Increment value of a.
Then return **old** value as r-value.

Recall: ++ for Variables

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Increment value of a.
Then return **new** value as **l-value**.

int_var++

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Then return **old** value as **r-value**.

`++` for Pointers

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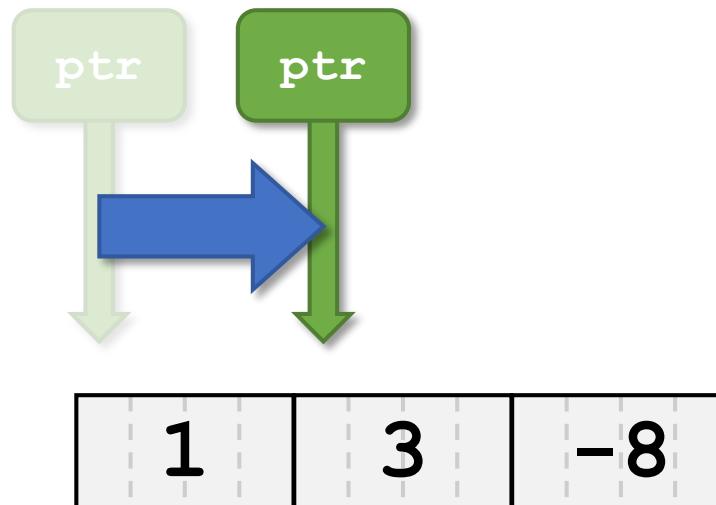
- Same idea...

`++` for Pointers

- Same idea...
- ...but: value of pointer is an **address**.

`++` for Pointers

- Same idea...
- ...but: value of pointer is an **address**.
→ Shift pointer to **next object**.

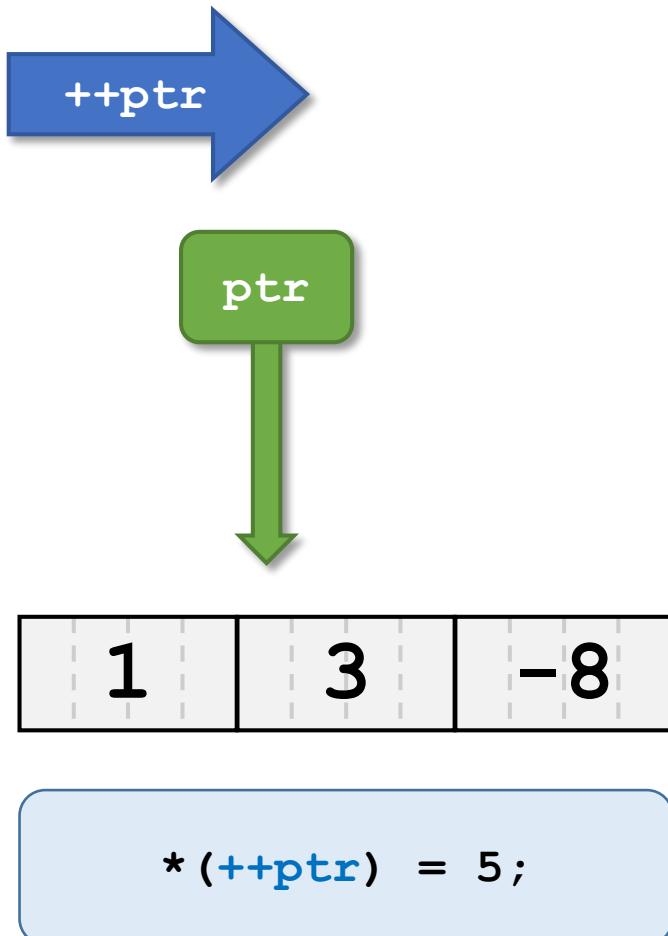


`++ptr` and `ptr++`

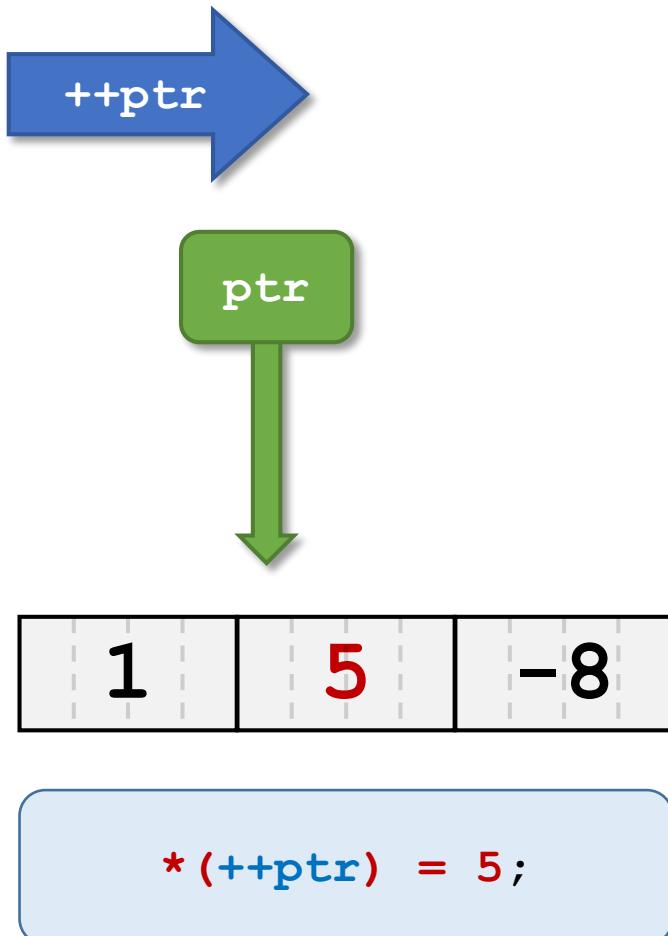


```
* (++ptr) = 5;
```

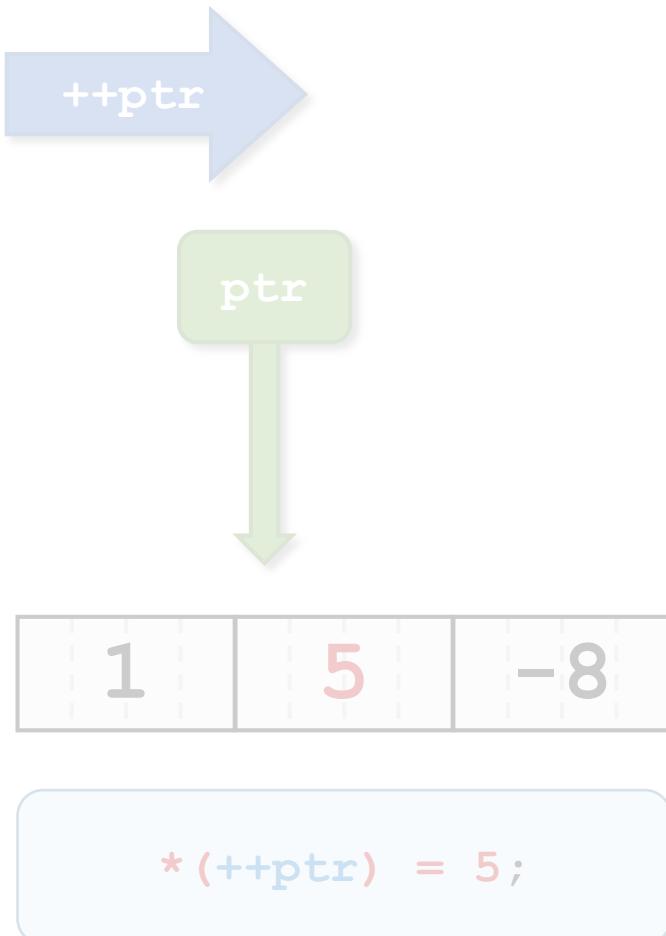
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`++ptr`



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```
* (ptr++) = 5;
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`++ptr` and `ptr++`

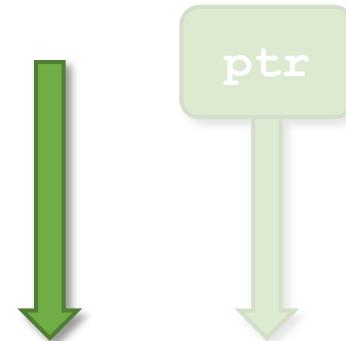
`++ptr`



```
1   5   -8
```

```
* (++ptr) = 5;
```

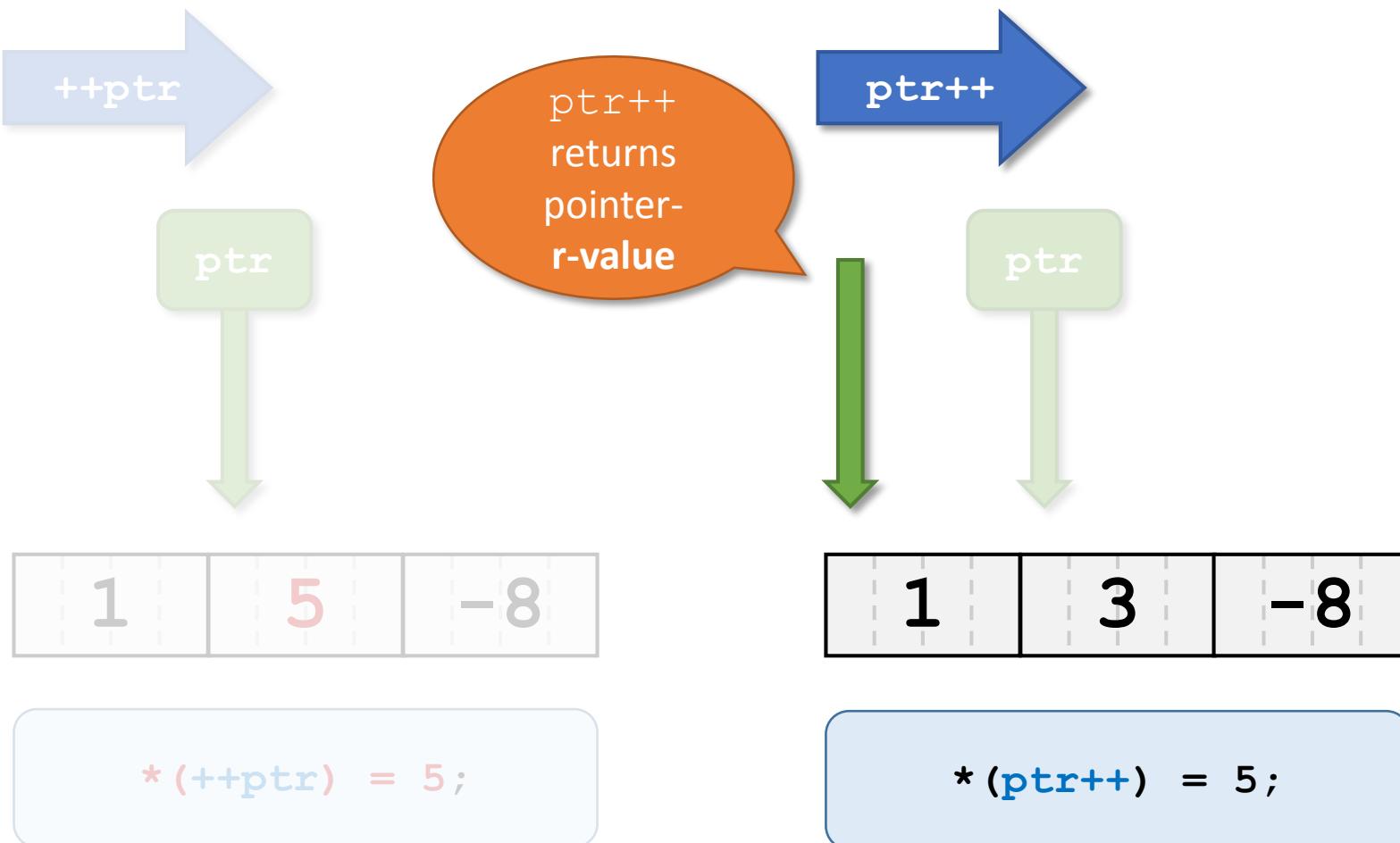
`ptr++`



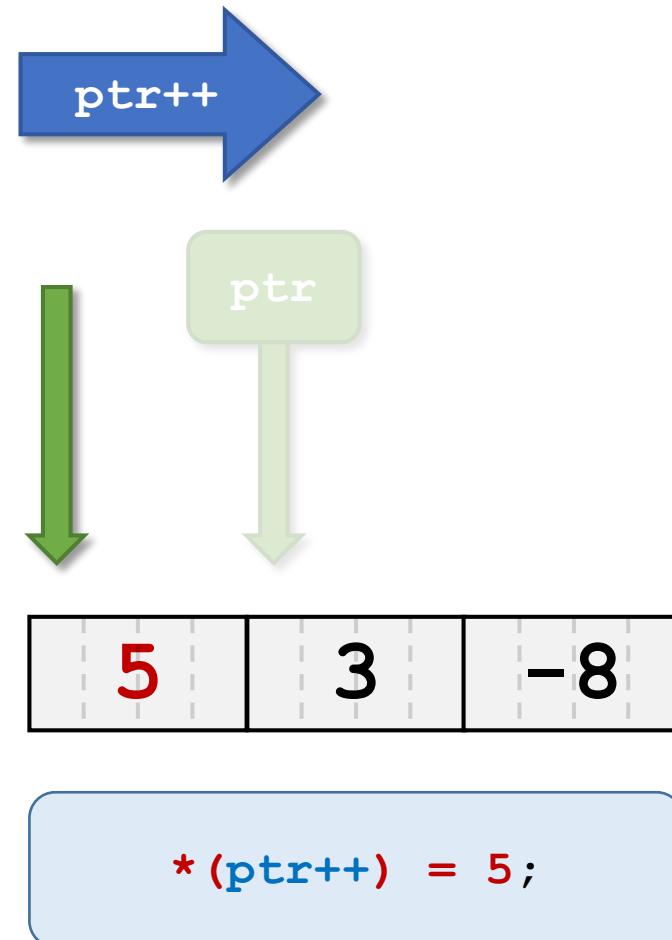
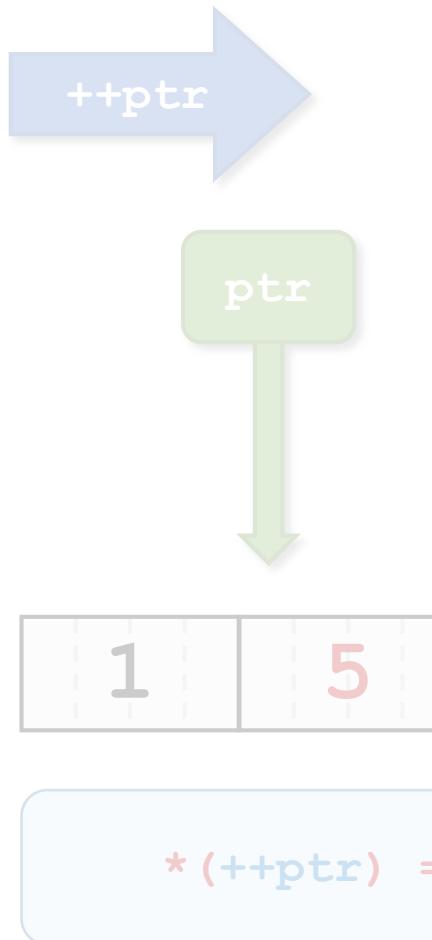
```
1   3   -8
```

```
* (ptr++) = 5;
```

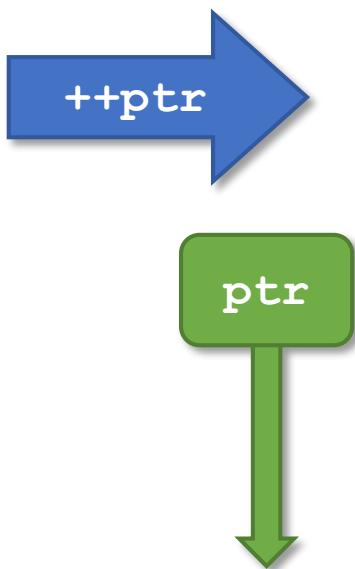
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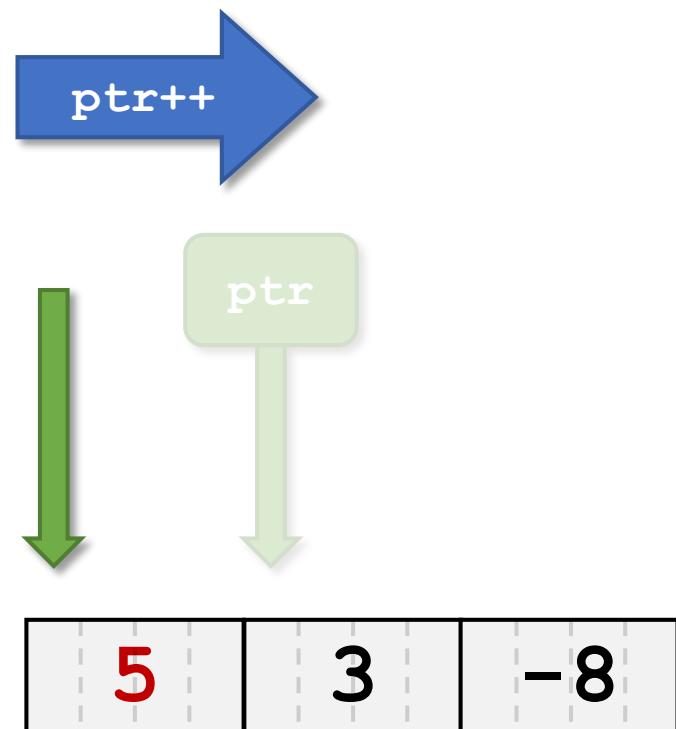


`++ptr` and `ptr++`



1	5	-8
---	---	----

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