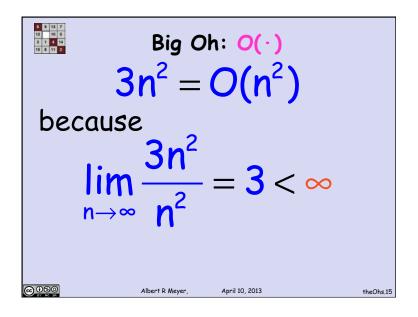


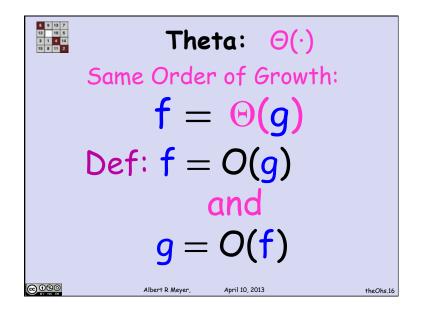
Big Oh:
$$O(\cdot)$$

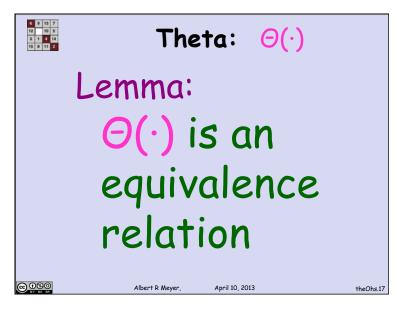
Asymptotic Order of Growth:

 $f = O(g)$
 $\lim\sup_{n\to\infty} \left(\frac{f(n)}{g(n)}\right) < \infty$

a technicality —ignore now







```
Asymptotics: Intuitive Summary

f \sim g: f \& g \text{ nearly equal}
f = o(g): f \text{ much less than } g
f = O(g): f \text{ roughly } \leq g
f = \Theta(g): f \text{ roughly equal } g
```

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