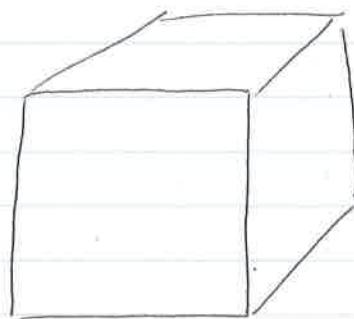
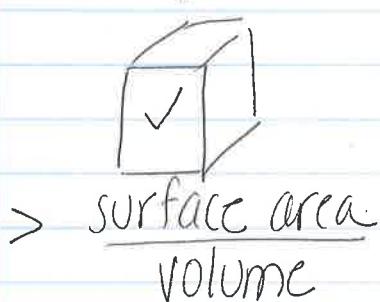


## Cell Growth, Division, & Reproduction

What limits cell size?

The larger a cell becomes, the less efficient it is in moving nutrients and waste materials across its membrane.

In addition, as a cell grows, it places increasing demands on its DNA.



As cell size increases, surface area does not increase as fast as volume does. Smaller cells have a higher surface area to volume ratio than larger cells.

How do organisms grow?

Cell division - process by which a cell divides into two daughter cells.

Before a cell divides, DNA must be copied or replicated.

What are the 2 types of reproduction?

Asexual Reproduction - production of a genetically identical offspring from a single parent or set of genes.

Sexual Reproduction - fusion of two reproductive cells from two parents in which the offspring inherit  $\frac{1}{2}$  of the genetic material from each parent.

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## Compare + Contrast (pg 278)

Asexual Reproduction	Sexual Reproduction
Diversity	lacking identical to parent genetically diverse + different than parents
Favorable when:	conditions are stable stable environments conditions are variable changing environment
Reproduction Rate	fast can quickly take advantage of resources when conditions remain favorable slow better chance of survival in different environments because some will have the right combination of genes to survive