

Rivers and Streams

Humans Interact with the Environment

A Model Unit of the Delaware Recommended Curriculum

Lesson 1

Delaware Ge



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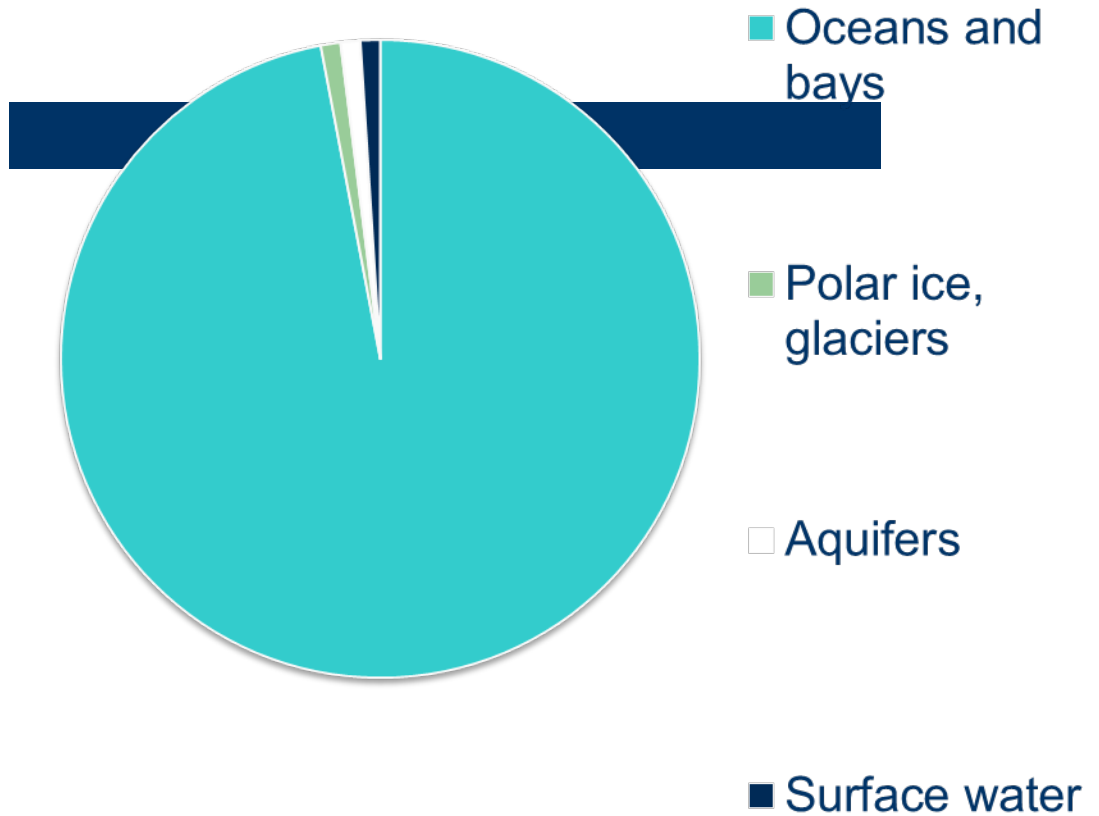
Most people agree that **water is important**. But did you know:

- Most of the water in the world is in the oceans, bays, estuaries and salt marshes.



Only 3% of all Earth's water is fresh water.

Only 1% of all water is fresh surface water.



Most of the world's Freshwater (that is, non-salty) is frozen in the ice caps and glaciers, or lies in underground aquifers.



People the world over are using and abusing their water at an ever faster rate.



Surface water

- Is **easy to access** by humans, animals and plants,
- Is **easily polluted** by human activities.
- Molds and **shapes the earth** through erosion and deposition.
- **Flows in predictable patterns** as streams and rivers.

Water is predictable- it ALWAYS flows downhill!



Most streams begin in the mountains or highlands.



They collect water from

- **-Run-off** from rainwater in the mountains
- **-Snowmelt** in the spring
- **-Mountain springs** (water seeping out from between rock layers).

High in the mountains, streams are narrow and flow swiftly.



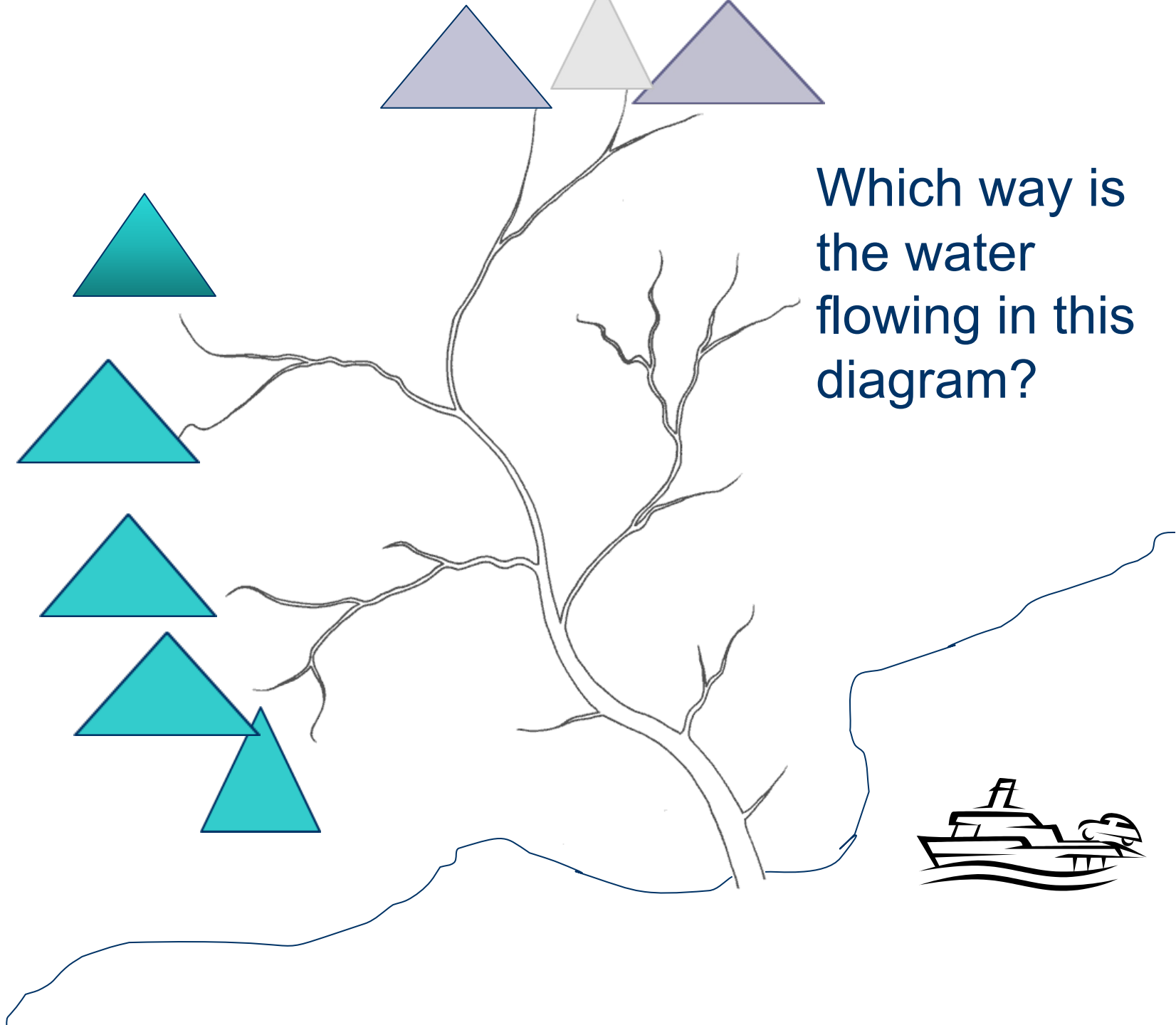
Erosion rates are high- the rushing water moves stones and soil.

Streams wear down rocks to form rapids and waterfalls.

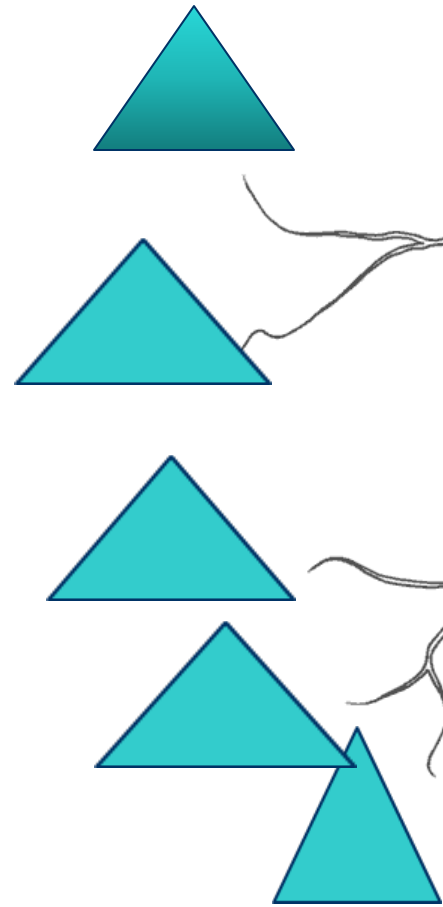


Whitewater rafting is dangerous, but fun!





Which way is the water flowing in this diagram?



When the stream descends to flatter land, it becomes wider, slower and muddier. Why?

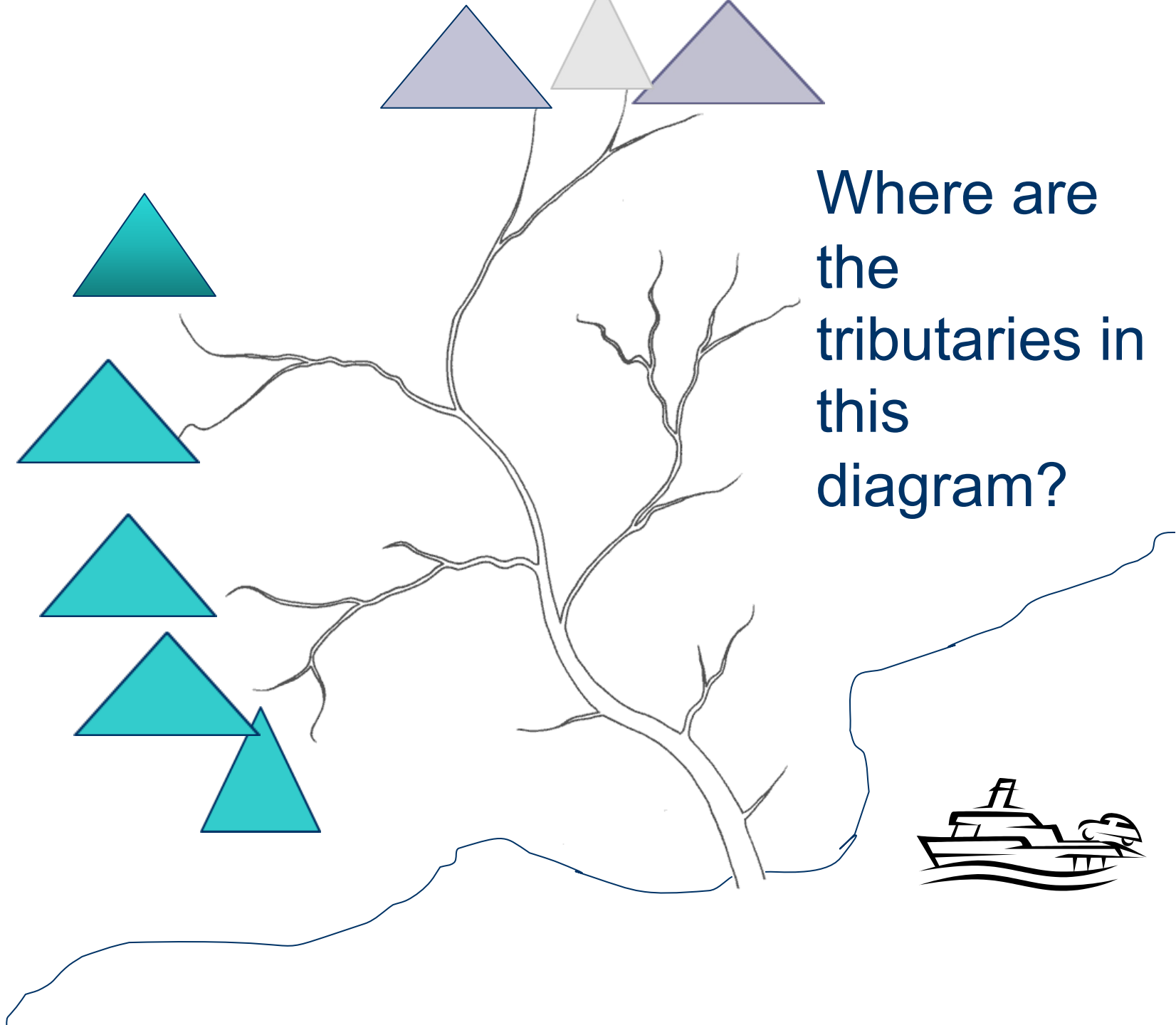


Tributaries are smaller rivers that join the mainstream. Many cities are built along these



Use a map or atlas to find cities in the US or the world that are built along rivers.





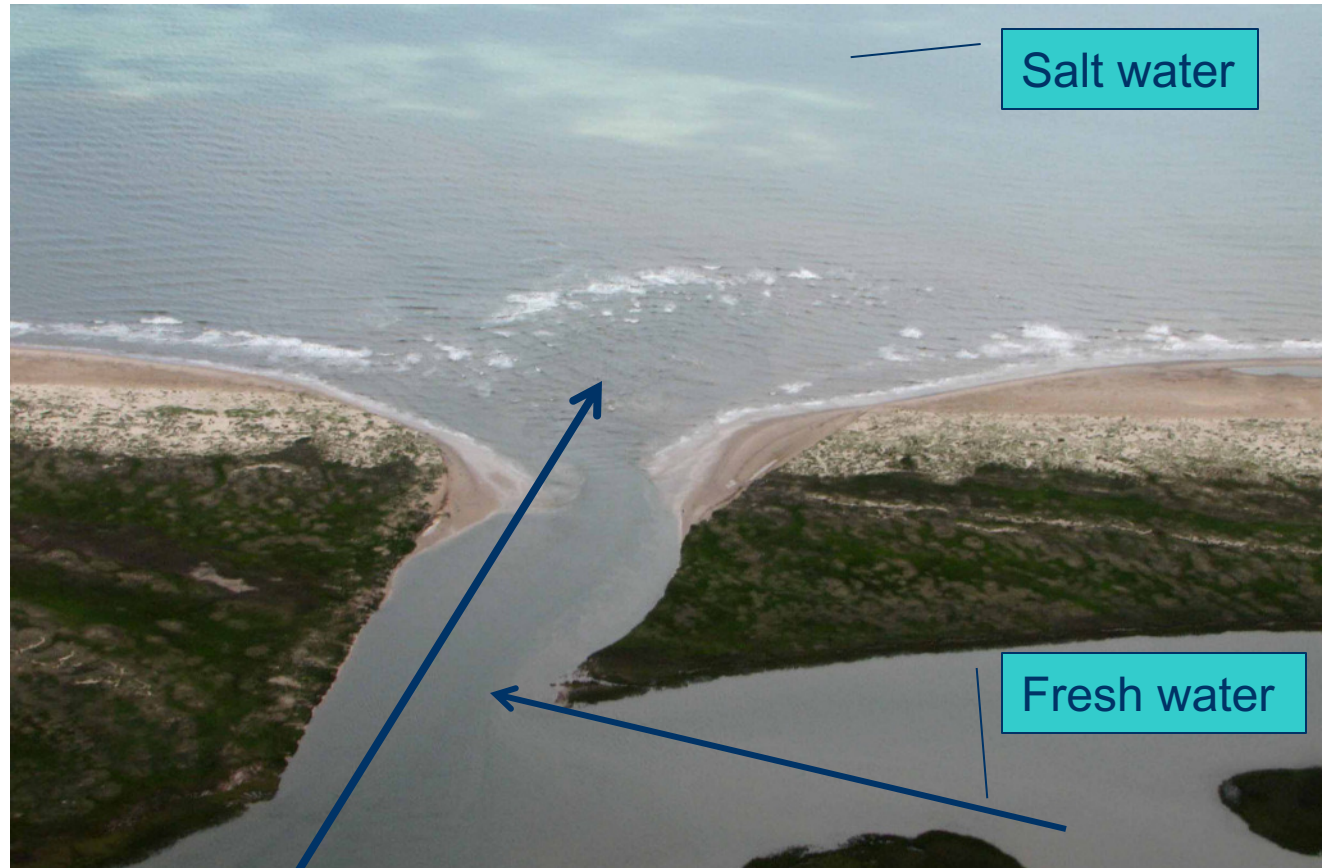
Where are the tributaries in this diagram?

People build things to try to control or use rivers. What is the purpose of each project?



When the river meets the sea,

The freshwater it carries is added to the salt water of the ocean.



Silt and sediment carried in the water are deposited, forming a **delta**.



- **Estuaries**, or tidal streams with *brackish* water may be formed near the mouth of the river.



Thinking like a
geographer:

Find a stream
system in your atlas.

Where is its source?

What tributaries can
you find?

Where is the mouth
of this river?

- If you traveled from the source of a river to its mouth, what kinds of human activities would you see along the way?
- How do activities *upstream* affect people living *downstream*?