

Solutions

Each answer shows the steps, then the **result**.

2.1

- No — they are hydrophobic

2.2

- A polar (hydrophilic) head and two nonpolar (hydrophobic) tails

2.3

- Fats (triglycerides)

3.1 B

- two nonpolar tails

3.2

(a)

- The polar heads face the water on both surfaces; the nonpolar tails point inward, away from water

(b)

- The hydrophobic tails are excluded from water and cluster together, while the hydrophilic heads interact with water, so the bilayer self-assembles

3.3

- Fats store more energy per gram than carbohydrates and are hydrophobic (stored without water), making them a compact, efficient long-term store