

Solutions

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

2.1

- The dose that kills 50% of a test population

2.2

- Lower

2.3

- X ($\text{LD}_{50} = 2 \text{ mg/kg}$)

3.1 A

- very toxic

3.2

(a)

- The 10 mg/kg pesticide — a lower LD_{50} means less is needed to be lethal, so it is more toxic

(b)

- $10 \times 60 = 600 \text{ mg}$

3.3

- A larger animal needs more of a substance to be affected, so expressing the dose per kg of body weight makes toxicity comparable across different body sizes