



Name _____ Class _____ Date _____

1 Which piece of equipment would most likely be used to **separate organelles** from a mixture of crushed cells?

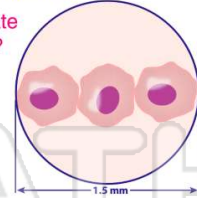
- A dissecting microscope
- B electron microscope
- C ultracentrifuge
- D microdissection instrument



2 The diagram below shows three cells in the field of view of a microscope. The diameter of the field of view is 1.5 millimeters.

What is the approximate **diameter** of each cell?

- A 50 μm
- B 250 μm
- C 500 μm
- D 4,500 μm



3 A student views a wet mount of a specimen with the low-power objective of a compound light microscope. After the student switches to **high power**, which procedure would most likely produce a **better view** of the specimen?

- A increasing the amount of light by adjusting the diaphragm

4 What is the **volume** of water in the **graduated cylinder** shown below?

- A 10.3 mL
- B 13.0 mL
- C 18.5 mL



PREVIEW

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9 Studies of fat cells and thyroid cells show that **fat cells have fewer mitochondria** than thyroid cells. A biologist would most likely **infer** that fat tissue

- A does not require energy
- B has energy requirements equal to those of thyroid tissue
- C requires less energy than thyroid tissue
- D requires more energy than thyroid tissue



10 A biologist reported success in **breeding a tiger with a lion**, producing healthy offspring. Other biologists will accept this report as **fact** only if

- A research shows that other animals can be crossbred
- B the offspring are given a scientific name
- C the biologist included a control in the experiment
- D other researchers can replicate the experiment





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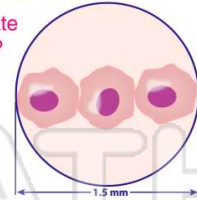


C

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B



B

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7

D a dichotomous key



- C A hypothesis requires no further investigation if it is proved by the experiment.
- D A hypothesis can be used to explain a conclusion even if it is disproved by the experiment.

B

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D