

Name: \_\_\_\_\_

Use the Laws of Logic to simplify the following. Use one law per line, and state the name of the law on each line.

$$(\overline{A\overline{A}} + B\overline{B}) + B\overline{B}$$

$$= A\overline{\overline{A}} + (B\overline{B} + B\overline{B})$$

Associative

$$= A\overline{\overline{A}} + B\overline{B}$$

Idempotent

$$= AA + 0$$

Complement (twice)

$$= A + 0$$

Idempotent

$$= A$$

Identity