

Name: _____

Show work needed to justify your answer.

Date: _____

HW: # 38: Math IBSL - Standard 37 - Exponents

5 points

In questions **1–10**, use exponent laws to simplify the expression as far as possible.

1 $a^5 \times a^3 \times a^7$

2 $2x^3 y^2 \times 7x^4 y^6$

3 $4ab^3 \times 0.5a^6c$

4 $\frac{8m^5}{4m^3}$

5 $\frac{6u^5v^2}{9u^3v^3}$

6 $(3rs^3)^3$

7 $(-2x^4 yz^5)^3$

8 $\left(\frac{x^{12}y^8}{x^5y^6}\right)^2$

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$$9 \quad \frac{(5x)^2(5y^3)}{(5x^3y^4)^3} \qquad 10 \quad \frac{9x^3(y^3)^3}{-81(x^{-2})^4 y^{11}}$$

- 11** Find an expression for the area of a square with side length $3x^2y$. Write your answer in its simplest form.
- 12** Find the area of a rectangle with width $4a^3b^2$ and length $\frac{5a}{2b^3}$. Write your answer in its simplest form.