

YOUR NAME: _____

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Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Simplify and write your answer without negative exponents (assuming that all variables represent nonzero real numbers):

$$\frac{5^{-2}xy^{-3}}{3x^{-2}} =$$

$$\frac{3y^{-4}y^{-6}}{2^{-3}y^2y^{-7}} =$$

2. Simplify and write your answer without negative exponents (assuming that all variables represent nonzero real numbers):

$$(5^{4-3y})^3(5^{y-2})^2 =$$

$$\frac{(5a^{-1}b^2)^3}{(5ab^{-2})^4} =$$