

NAME: _____

***Simplify. Always show at least one step (before you give the answer).
Write your answer as a power.
Don't leave negative exponents in your answer.***

1) $x^{-9} \times x^{-4}$

2) $p^{-7} \div p^2$

3) $w^{-13} \times w^8$

4) $m^{-14} \div m^{-5}$

5) $a^{-3} \div a^6 \div a^{-8}$

6) $y^{-5} \div y^9 \times y^4$

7) $x^{-4} \times x^{-8} \div x^{-7}$

8) $b^{-3} \times b \div b^5$

9) $(x^{-2})^3 \div (x^3)^2$

10) $(w^2)^{-7} \times (w^{-3})^{-4}$

11) $(2y^4)^2$

12) $(a^2b^4)^{-1}$

*Simplify. Always show at least one step.
Write your answer as a power.
Don't leave negative exponents in your answer.*

13) $5^4 \times 5^7$

14) $7^{-8} \div 7^2$

15) $6^{-8} \times 6^{-15}$

16) $(-9)^4 \div (-9)^4$

17) $(-7)^{12} \times (-7)^{-8} \div (-7)^{17}$

18) $(2^{-4})^2 \div (2^2)^6$

*Evaluate. Always show at least one step.
Write your answer as an actual number (leave fractions).*

19) 2^{-1}

20) 3^{-2}

21) $3^2 \times 3^{-2}$

22) $3^{-2} \times 3^2$

23) $3^{-2} \div 3^2$

24) $3^2 \div 3^{-2}$

Evaluate. Always show at least one step.

Write your answer as an actual number (leave fractions).

25) $\left(\frac{1}{2}\right)^0$

26) $\left(\frac{1}{4}\right)^{-2}$

27) $\left(\frac{3}{4}\right)^{-2}$

28) $\left(\frac{1}{10}\right)^{-1}$

29) $(-2)^3$

30) $(-2)^{-3}$

31) $(-5)^0$

32) -5^0

Evaluate. Simplify completely, then evaluate for a = -1, b = 2.

Don't leave any exponents in your answer.

33) $b^3 \times b$

34) $b^{-4} \div b^{-2}$

35) $(b^3)^2$

36) $(a^{-3})^4$

*Evaluate. Simplify completely, then evaluate for $a = -1$, $b = 2$.
Don't leave any exponents in your answer.*

37) $a^3b^1 \times a^{-2}b^2$

38) $(a^2b^1)^3$

39) $(a^{-2}b^3)^{-1}$

4) $\frac{a^3b^7}{ab^5}$

41) $\frac{a^1b}{a^3b^{-3}}$

Answers.
