

Algebra II
4-2
Laws of Exponents

The diagram shows the expression $17x^3y^2$. A red line above the expression has an arrow pointing to the coefficient '17'. A blue line above the expression has two arrows pointing to the exponents '3' and '2'. A green line below the expression has two arrows pointing to the variables 'x' and 'y'.

Laws of Exponents

1) $x^3 \cdot x^4 =$ _____

2) $(-x^3)^4 =$ _____

3) $(3x^4y^5)^2 =$ _____

4) $(x + y)^2 =$ _____

5) $(3^3 \cdot 2^4)^2 =$ _____

6) $-2^2 =$ _____

7) $(-2)^2 =$ _____

Simplify. (pg 173)

1) $3z^2 \cdot 2z^3$

11) $(-3pq^4r^2)^3$

21) $z^{n-2} \cdot z^{n+2}$

27) $t(t^{n-1} + t^n + t^{n+1})$

Simplify.

33) $(t^m)^n (t^n)^{n-m}$

Solve.

35) $3^{5n} = 3^5(3^{2n})^2$

Assignment: pg. 173 2-38 even
