

GCF with fractions, fractional exponents, and negative exponents

Factor the following: $2x^5+6x^3$.

Explain your reason for what gets factored out, what remains.

This same rationale works when factoring expressions unlike those we have factored before. Remember, you can easily check by multiplying

Fractional coefficients, or coefficients without a common integer factor.

(1) Factor out a 5: $5x+3 =$

(2) Factor out a 3: $5x+3 =$

(3) Factor out a $\frac{1}{3}$: $\frac{1}{3}x+4 =$

(4) Factor out a $\frac{1}{2}x$: $\frac{1}{6}x^2 + \frac{3}{2}x =$

(5) Factor out a $\frac{1}{6}x$: $\frac{1}{6}x^2 + \frac{3}{2}x =$

Fractional or negative exponents. (this is not in book but will be on test)

(1) $x^{\frac{3}{2}} - x^{\frac{1}{2}}$

(2) $y^{-2} + y^3$

(3) $x^{-3} + x^{-5}$

(4) $a^{\frac{-1}{4}} - a^{\frac{3}{4}}$

(5) $12x^{-3} + 20x^2$

(6) $9x^{\frac{5}{2}} - 3x^{\frac{1}{2}} + 6x^{-\frac{1}{2}}$