Name:

BECA / Dr. Huson / Geometry 04 Analytic Geometry

4.20 Challenge Quiz: Exponent rules   **CCSS.HSN.RN.A.2**

Simplify, leaving no negative or fractional exponents. No calculators. No notes.

Exponent rules

1. $3^2 \times 3^1$

3. $x^4 y^3 \div y^2$

2. $a^3 \times a^2 b^4$

4. $3x^2 y \times (y^3)^2$

Radicals and exponents

5. $\dfrac{\sqrt[3]{27}}{\sqrt{4}}$

6. $\sqrt{x^6 y^2}$

7. $\sqrt{\dfrac{a^2 b}{25 c^4}}$

Fractional and negative exponents

8. $36^{\frac{1}{2}}$

10. $\left(\dfrac{1}{2}\right)^{-1}$

9. $(x^3 y^6)^{\frac{1}{3}}$

11. $(a^3)^{-2}$

Mixed

12. $5x^{-2} y \times 2x^2 y^2$

13. $\dfrac{2\sqrt{36x^2}}{\sqrt[3]{27x^3}}$