

Handout 1: Austin Powers-Answers

Or maybe it's just powers.

1. Simplify $(z^1 z^5)^4$.

$$z^{24}$$

$$-4x^{25}$$

2. Simplify $(t^2)^3(t^4)^5$.

$$t^{26}$$

7. Simplify $\frac{(t^3 t^1)^5}{t^{10}}$.

$$t^{10}$$

3. Simplify $xyz^4xy^9z^0$.

$$x^2y^{10}z^4$$

8. Simplify $(10z^{-4})^2 \left(-\frac{1}{5}z^6\right)$.

$$-\frac{20}{z^2}$$

4. Simplify $(xy)^5(x^9y^7)$.

$$x^{14}y^{12}$$

9. Simplify using positive exponents:

$$\left(\frac{32(x^2)^5}{4x^5x^2}\right)^2$$

$$64x^6$$

5. Simplify $4x^4(y^2)^2(4x^2y^4)^2$.

$$64x^8y^{12}$$

10. Simplify $\left(\frac{(x^4x^2y)^0}{3^{-2}x^5y^{-2}}\right)^2$.

$$\frac{81y^4}{x^{10}}$$

6. Simplify $-8x\left(\frac{1}{2}\right)^3(2(x^4)^3)^2$.

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