Handout 1: Austin Powers-Answers

Or maybe it's just powers.

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

   z^{24}

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

   t^{26}

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

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

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

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

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

   $64x^8 y^{12}$

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

   $-4x^{25}$

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

   t^{10}

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

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

9. Simplify using positive exponents: $\left(\frac{32(x^2)^5}{4x^5 x^2}\right)^2$.

   $64x^6$

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

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