College of
Staten Island
The City University of New York

Name: _____

Simplify the following expressions.

1. $x^2 x^3 x^4$ **ANSWER** _____

2. $x^2 y^2 x^3 y^3$ **ANSWER** _____

3. $xyzx^2 y^3 z^4$ **ANSWER** _____

4. $\dfrac{x^3}{x^2}$ **ANSWER** _____

5. $\dfrac{x^5}{x^2 x^7}$ **ANSWER** _____

6. $\dfrac{x^5 x^2}{x^4}$ **ANSWER** _____

7. $\dfrac{x^2 y^3}{y^2 x^5}$ **ANSWER** _____

8. $\dfrac{xy}{x^2 y^2 z}$ **ANSWER** _____

9. $\dfrac{1}{x^{-2}}$ **ANSWER** _____

10. $(xy)^{-3}$ **ANSWER** _____

11. $x^{-2}x^4x^3$ **ANSWER** _____

12. $\dfrac{x^{-1}x^5}{x^2x^{-3}}$ **ANSWER** _____

13. $\dfrac{x^{-1}y^2}{y^{-2}x^3}$ **ANSWER** _____

14. $\dfrac{x^2z^2}{y^2x^4}\dfrac{y^3x}{z^4x^2y}$ **ANSWER** _____

15. $(x^2)^2x^3$ **ANSWER** _____

16. $(y^3)^2(y^2)^3$ **ANSWER** _____

17. $(xy)^2x^3y^2$ **ANSWER** _____

18. $(xyz)^4x^2z^{-3}y^{-1}$ **ANSWER** _____

19. $\dfrac{x^{-1}y^2}{y^{-2}x^3}$ **ANSWER** _____

20. $\dfrac{x^3y^{-7}}{y^4x^{-3}}$ **ANSWER** _____