AGS 2
Module 3.4 Homework/Review

Name_____
Period_____

Simplify. Do not leave any negative exponents in your solutions.

1) $2x^2 \cdot 5x =$

2) $2m^3 \cdot m^4 \cdot 4m^{12} \cdot m^{11} =$

3) $bc^3 \cdot a^2b^2c^3 \cdot b^3c^7 =$

4) $(-4n^4m)(n^3m^5) =$

5) $\frac{12x^7}{8x^2y^2} =$

6) $\frac{-3x^2y^2}{6x^{12}y} \cdot \frac{9x^7y^5}{15x^3} =$

7) $\frac{12x^5y^6}{5x^7z} \cdot \frac{24xyz}{9x^3z^4} =$

8) $2xy^3 \cdot \left(\frac{15x}{6x^2y}\right) =$

9) $3x^{-2} \cdot 4x^5 =$

10) $2m^{-3} \cdot m^{-4} \cdot 5m^{12} \cdot m^{-6} =$

11) $(n^{-7}m)(n^{6}m^{-10}) =$

12) $-12bc^{3} \cdot -2a^{-2}b^{-5}c^{-3} \cdot 3b^{3}c^{-7} =$

13) $\frac{12x^{-7}}{9x^{-5}y^{-4}} =$

14) $\frac{-3x^{9}y^{-3}z^{3}}{6x^{-6}y^{4}z^{2}} \cdot \frac{9xy^{-9}}{xyz} =$

15) $\frac{7x^{10}y^{-6}}{3x^{-10}} \cdot \frac{11z^{5}}{9x^{-3}z^{-8}} =$

16) $\frac{14y^{-3}}{21xy} \cdot \frac{6y^{-5}}{8x^{4}y^{-2}} =$

17) $(3x^{-3}y)^{-1} =$

18) $(5x^{-3}y)^{-1} \cdot (5x^{-3}y)^{-1}$

19) $3(x^{-3}y)^{-2} =$

20) $5(3x^{-2}y^{4})^{-3} =$

21) $\left(\frac{x^{-9}y^{-7}}{x^{10}y^{10}}\right)^{-2} =$

22) $\left(\frac{12x^{-7}y^{16}}{15x^{-4}y^{20}}\right)^{-1} =$

23) $\left(\frac{x^2y^3}{-y^5}\right)^{-2} \cdot \left(\frac{x^3y^7}{x^{12}y^6}\right)^4 =$

24) $\frac{(2n^2m^{-2}\cdot m^4n^4)^0}{8p^{-3}n^4m^{-2}}$

25) $\frac{(3n^2m^{-2}\cdot m^8n^{-7})^2}{30m^{-3}n^4mn^{-2}}$

26) $\left(\frac{4x^3y^4}{3y^{-8}}\right)^{-2} \cdot \left(\frac{3xy^3}{2x^{-3}y^{-2}}\right)^3 =$

27) $\frac{12m}{(2m^{-3})^{-5}} =$

28) $\frac{3m^{-6}}{(6m^{-3})^2} =$

29) $5^2 \cdot 5^{-3} \cdot (5^2)^{-1} =$

30) $x^2 \cdot x \cdot (x^2)^{-3} =$

Write in Exponential form:

31) $\left(\sqrt[3]{2x}\right)^4$

32) $\sqrt[3]{x^5}$

33) $\sqrt{x^5}$

34) $\left(\sqrt[5]{32x^{10}}\right)^{-3}$

Write in radical form:

35) $(4x)^{\frac{1}{3}}$

36) $4y^{\frac{-2}{5}}$

37) $125^{\frac{2}{3}}$

38) $x^{\frac{5}{6}}$

39) $5x^{\frac{1}{2}}$

40) $10^{\frac{-3}{2}}$

Simplify:

41) $\sqrt[3]{1000x^{12}}$

42) $(3x^4)^{\frac{2}{3}}$

43) $6(x)^{\frac{2}{5}}$

44) $(5x^6)^{\frac{1}{4}}$

45) $\left(\sqrt[4]{32x^3}\right)^5$

46) $81^{\frac{-3}{4}}$

This last page is OPTIONAL.

There will be a section like this on this test which covers MODULE 3 – Quadratics. If your last test score was not to your liking, you have another opportunity to bring up the "Solving Quadratics" learning target portion of your grade. You will have questions similar to this page – but to improve your score, you MUST be able to do each method with accuracy.

Solve by factoring:

47) $y = x^2 + 10x + 21$

48) $y = 2x^2 + 3x - 5$

Solve by completing the square:

49) $y = x^2 - 4x - 12$

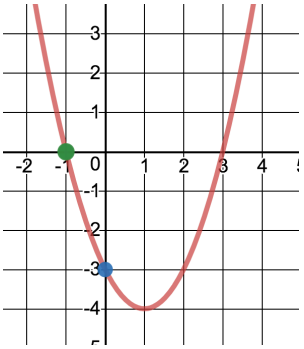
50) $y = x^2 + 6x + 16$

Solve using the quadratic formula

51) $y = 2x^2 - 5x - 12$

52) $y = x^2 - 2x - 5$

53) From the graph, create an equation for the graph the forms listed.



Standard Form_____

Vertex Form_____

Factored Form_____