Northwest-Shoals Community College
Mathematics, Science, and Technology Division
MTH 100 Practice Test 4 Radicals

1. Write with a rational exponent: $\sqrt[3]{x^2}$
2. Write with a radical: $7^{3/4}$

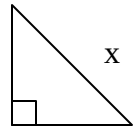
Simplify the following expressions:

3. $\sqrt[3]{64x^2y^{10}}$
4. $\sqrt{45z^3} + z\sqrt{80z}$
5. $\sqrt{8}\left(\sqrt{2}-\sqrt{3x}\right)$
6. $\sqrt[3]{27x^5y^2} + 2\sqrt[3]{x^2y^2} - 3x\sqrt[3]{64x^{11}y^5}$
7. $\left(2\sqrt{5}+3\right)\left(2\sqrt{5}-2\right)$
8. $\left(4\sqrt{x}+\sqrt{7}\right)^2$
9. $\sqrt{\dfrac{32x^3y}{2x^5y^3}}$
10. $\dfrac{\sqrt{b}}{\sqrt{b}-\sqrt{a}}$
11. $\left(\sqrt{-8}\right)\left(\sqrt{-2}\right)$
12. $(5-2i)-(8-4i)$
13. $(2+5i)(4-2i)$
14. $\dfrac{2+3i}{1-2i}$

Northwest-Shoals Community College
Mathematics, Science, and Technology Division
MTH 100 Practice Test 4 Radicals

Solve the following equations **and** indicate the theorem or method you used:

15. Find the measure of the missing side of the right triangle below:



16. $\sqrt[3]{2x-2}+4=2$

17. $(r-2)^2+28=0$

18. $t^2-t=7$

19. $x^2+13=2x$

20. The velocity of an object in ft/sec is given by $V=\sqrt{64d}$.
Find the distance the object has traveled given a velocity of 192 ft/sec.