

MATH 0372 – RADICAL EXPONENTS

Instructions: Evaluate each of the following

1. $27^{\frac{1}{3}}$

2. $-49^{\frac{1}{2}}$

3. $(-49)^{\frac{1}{2}}$

4. $\left(\frac{16}{25}\right)^{-\frac{1}{2}}$

5. $16^{\frac{3}{4}}$

6. $8^{-\frac{2}{3}}$

Simplify each of the following

7. $\left(\frac{a^{-\frac{1}{2}}}{b^{\frac{1}{3}}}\right)^6$

8. $\frac{\left(x^{\frac{1}{3}}y^{-3}\right)^6}{x^4y^{10}}$

9. $\frac{\left(25a^6b^4\right)^{\frac{1}{2}}}{\left(8a^{-9}b^3\right)^{\frac{1}{3}}}$

10. $\left(x^{\frac{3}{5}} + 2\right)\left(x^{\frac{3}{5}} - 7\right)$

11. $\left(5a^{\frac{1}{2}} - 4b^{\frac{1}{2}}\right)\left(3a^{\frac{1}{2}} - b^{\frac{1}{2}}\right)$

12. $\left(t^{\frac{1}{3}} + 3\right)^2$

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1. 3	2. -7	3. $7i$
4. $\frac{5}{4}$	5. 8	6. $\frac{1}{4}$
7. $\frac{1}{a^3b^2}$	8. $\frac{1}{x^2y^{28}}$	9. $10b^3$
10. $x^{6/5}-5x^{3/5}-14$	11. $15a - 17a^{1/2}b^{1/2}+4b$	12. $t^{2/3}+6t^{1/3}+9$

