

**MATH R3 PROF. ALFRED DOLICH TEST #4
REVIEW**

- (1) Evaluate: $32^{\frac{2}{5}}$
- (2) Evaluate: $9^{\frac{4}{3}}$
- (3) Evaluate: $-8^{\frac{1}{3}}$
- (4) Evaluate: $(-27)^{-\frac{4}{3}}$
- (5) Evaluate: $\frac{64^{\frac{3}{2}}}{9^{\frac{1}{2}}}$
- (6) Evaluate: $\frac{25^{-\frac{1}{2}}}{27^{-\frac{1}{3}}}$
- (7) Write with positive integer exponents only: $x^{\frac{17}{6}}$
- (8) Write with positive integer exponents only: $y^{-\frac{2}{5}}$
- (9) Rewrite using rational exponents: $\sqrt[5]{x^{14}}$
- (10) Rewrite using rational exponents: $y^3 \sqrt[3]{(x+2)^5}$
- (11) Simplify: $y^{\frac{1}{3}} \cdot y^{\frac{1}{5}}$
- (12) Simplify: $\frac{z^{-\frac{3}{4}}}{z^{-\frac{1}{7}}}$
- (13) Simplify: $(z^3 x^{-\frac{1}{3}})^{\frac{3}{4}}$
- (14) Simplify: $\left(\frac{z^{\frac{1}{3}}}{x^2}\right)^{-\frac{1}{6}}$
- (15) Write as a single radical: $\sqrt{x^2} \cdot \sqrt[7]{x}$
- (16) Write as a single radical: $\frac{\sqrt[3]{x}}{\sqrt[4]{x^3}}$
- (17) Write as a single radical: $\sqrt[3]{\sqrt[4]{x}}$
- (18) Write as a single radical: $\sqrt{(\sqrt[7]{x})^6}$
- (19) Write as a simplified single radical: $\sqrt[15]{x^3}$

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(20) Write as a simplified single radical: $\sqrt[14]{x^7}$