

Unit 5 Test Review Part 3

Date _____ Period _____

Simplify.

1) $-3\sqrt{20} - \sqrt{6} - 3\sqrt{5}$

A) $-6\sqrt{5} - \sqrt{6}$

B) $-9\sqrt{5} - \sqrt{6}$

C) $-3\sqrt{5} - 2\sqrt{6}$

D) $-3\sqrt{5} - \sqrt{6}$

2) $\sqrt{15} \cdot \sqrt{15}$

A) 15

B) $2\sqrt{5}$

C) 225

D) $\sqrt{30}$

3) $\sqrt{15} \cdot 4\sqrt{3}$

A) $12\sqrt{5}$

B) $3\sqrt{5}$

C) $3\sqrt{2}$

D) 45

4) $5\sqrt{2}(-4\sqrt{2} + 5)$

A) $-2\sqrt{5} + 4$

B) $-12\sqrt{2} + 3$

C) $-40 + 25\sqrt{2}$

D) $-12\sqrt{3} - 20\sqrt{5}$

5) $(-4\sqrt{5} - 1)(\sqrt{5} - 4)$

A) -16

B) $20\sqrt{2} + 4\sqrt{5}$

C) $-16 + 15\sqrt{5}$

D) $5\sqrt{2} + 3$

Write each expression in radical form.

6) $2^{\frac{6}{5}}$

A) $(\sqrt[5]{2})^6$

B) $(\sqrt[4]{5})^7$

C) $\sqrt[3]{6}$

D) $\sqrt[4]{3}$

Write each expression in exponential form.

7) $(\sqrt[5]{3})^4$

A) $10^{\frac{5}{6}}$

B) $6^{\frac{3}{2}}$

C) $7^{\frac{1}{3}}$

D) $3^{\frac{4}{5}}$

8) $(\sqrt[4]{x})^3$

A) $x^{\frac{1}{2}}$

B) $(6x)^{-\frac{3}{2}}$

C) $x^{\frac{3}{4}}$

D) $(4x)^{-\frac{5}{3}}$

Write each expression in radical form.

9) $x^{-\frac{4}{3}}$

A) $\sqrt[3]{2x^2}$

B) $\frac{1}{(\sqrt[4]{5x})^7}$

C) $(\sqrt{7x})^3$

D) $\frac{1}{(\sqrt[3]{x})^4}$