Circuit Training – Simplifying Radical Expressions   Name _____

Directions: Begin in cell #1. Simplify the radical. Circle your final answer. Hunt for your simplified expression. Call that cell #2 and proceed in this manner until you complete the circuit. You should not need a calculator to simplify these expressions.

Answer: $6b^3$ # ___1___ $\sqrt{75a^2b^4}$	Answer: $30b^2\sqrt{6a}$ # _____ Given $a^2 + b^2 = 1$, simplify $\sqrt{9(1-a^2)b^2}$.
Answer: a^2 # _____ $\sqrt[3]{216b^9}$	Answer: $5b^2\sqrt{5ab}$ # _____ $\sqrt{72a^2b^2}$
Answer: $3b^2\sqrt{5a}$ # _____ $\sqrt{32a^3b^2}$	Answer: $2\|a^3b\|\sqrt[4]{125}$ # _____ $3\sqrt[4]{32a^4b^8}$
Answer: $2\|a\|b^2\sqrt[4]{5a}$ # _____ $\sqrt[3]{64a^6b^3}$	Answer: $\|b\|$ # _____ $\sqrt{225a^6b^4}$
Answer: $4a\|b\|\sqrt{2a}$ # _____ $\sqrt{90a^4b^6}$	Answer: $5\|a\|b^2\sqrt{3}$ # _____ $\sqrt{45ab^4}$

Answer: $3b^2$ \# _____ Given $a^2 + b^2 = 25$, simplify $\sqrt{(25 - b^2)^2}$.	Answer: $15\|a^3\|b^2$ \# _____ $\sqrt[3]{8a^3b^6}$
Answer: $3a^2\|b^3\|\sqrt{10}$ \# _____ $\sqrt{125ab^5}$	Answer: $3b\sqrt[3]{2a^2}$ \# _____ $\sqrt[3]{\dfrac{625a^3b^2}{5b^2}}$ $a, b \neq 0$
Answer: $10\|a\|b^4\sqrt{3b}$ \# _____ $\sqrt{b^2}$	Answer: $6\|a\|b^2\sqrt[4]{2}$ \# _____ $6\sqrt{150ab^4}$
Answer: $2ab^2$ \# _____ $\sqrt[3]{54a^2b^3}$	Answer: $6\|ab\|\sqrt{2}$ \# _____ $\sqrt{300a^2b^9}$
Answer: $5a$ \# _____ $\sqrt[4]{80a^5b^8}$	Answer: $4a^2b$ \# _____ $\sqrt[4]{\dfrac{10000a^{12}b^4}{5}}$

© Virge Cornelius 2016