

Practice Assignment

1. Simplify the following radicals (Pick 4):

a. $\sqrt{5} \cdot -4\sqrt{20}$

$\sqrt{5} \cdot -4\sqrt{2 \cdot 2 \cdot 5}$
 $\sqrt{5} \cdot -4 \cdot 2 \sqrt{5}$
 $\sqrt{5} \cdot -8\sqrt{5}$
 $-8\sqrt{5 \cdot 5}$
 -40

b. $3\sqrt{5} \cdot -2\sqrt{5}$

$3 \cdot -2 \cdot \sqrt{5 \cdot 5}$
 $-6 \cdot 5$
 -30

c. $5\sqrt{15} \cdot -2\sqrt{5}$

$5 \cdot -2 \sqrt{3 \cdot 5 \cdot 5}$
 $5 \cdot 5 \cdot -2 \sqrt{3}$
 $-50\sqrt{3}$

d. $-3\sqrt{7} \cdot 6\sqrt{12}$

$-3 \cdot 6 \sqrt{7 \cdot 4 \cdot 3}$
 $-3 \cdot 6 \cdot 2 \sqrt{21}$
 $-36\sqrt{21}$

e. $3\sqrt{12} \cdot \sqrt{6}$

$3 \cdot \sqrt{2 \cdot 6 \cdot 6}$
 $3 \cdot 6 \sqrt{2}$
 $18\sqrt{2}$

f. $-4\sqrt{15} \cdot \sqrt{3}$

$-4 \sqrt{15 \cdot 3}$
 $-4 \sqrt{3 \cdot 3 \cdot 5}$
 $-4 \cdot 3 \sqrt{5}$
 $-12\sqrt{5}$

2. Simplify the following radicals (Pick 4):

a. $6\sqrt{6} - 2\sqrt{6}$

$6 - 2 \sqrt{6}$
 $4\sqrt{6}$

b. $-3\sqrt{7} + 4\sqrt{7}$

$-3 + 4 \sqrt{7}$
 $-1\sqrt{7}$

c. $-10\sqrt{5} + 12\sqrt{5}$

$-10 + 12 \sqrt{5}$
 $-2\sqrt{5}$

d. $2\sqrt{6} - 2\sqrt{24}$

$2\sqrt{6} - 2\sqrt{2 \cdot 2 \cdot 2 \cdot 3}$
 $2\sqrt{6} - 2 \cdot 2 \sqrt{2 \cdot 3}$
 $2\sqrt{6} - 4\sqrt{6}$
 $-2\sqrt{6}$

e. $2\sqrt{6} + 3\sqrt{54}$

$2\sqrt{6} + 3\sqrt{2 \cdot 3 \cdot 3 \cdot 3}$
 $2\sqrt{6} + 3 \cdot 3 \sqrt{6}$
 $2\sqrt{6} + 9\sqrt{6}$
 $11\sqrt{6}$

f. $3\sqrt{8} + 3\sqrt{2}$

$3\sqrt{2 \cdot 2 \cdot 2} + 3\sqrt{2}$
 $3 \cdot 2 \sqrt{2} + 3\sqrt{2}$
 $6\sqrt{2} + 3\sqrt{2}$
 $9\sqrt{2}$

3. Simplify the following radicals (Pick 4):

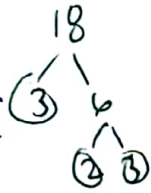
a. $3\sqrt{18} - 2\sqrt{2}$

$3\sqrt{2 \cdot 3 \cdot 3} - 2\sqrt{2}$

$3 \cdot 3\sqrt{2} - 2\sqrt{2}$

$9\sqrt{2} - 2\sqrt{2}$

$7\sqrt{2}$



b. $3\sqrt{5} + 3\sqrt{6} + 7\sqrt{5}$

$3\sqrt{5} + 7\sqrt{5} + 3\sqrt{6}$

$10\sqrt{5} + 3\sqrt{6}$

$10\sqrt{5} + 3\sqrt{6}$

c. $-\sqrt{6} - 3\sqrt{6} - 2\sqrt{5}$

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

$-4\sqrt{6} - 2\sqrt{5}$

$-4\sqrt{6} - 2\sqrt{5}$

d. $\sqrt{3}(\sqrt{3} + 4)$

$(\sqrt{3} \cdot \sqrt{3}) + (\sqrt{3} \cdot 4)$

$\sqrt{9} + 4\sqrt{3}$

$3 + 4\sqrt{3}$



e. $\sqrt{2}(3\sqrt{14} - \sqrt{7})$

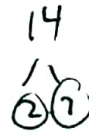
$(\sqrt{2} \cdot 3\sqrt{14}) - (\sqrt{2} \cdot \sqrt{7})$

$3\sqrt{28} - \sqrt{14}$

$3\sqrt{2 \cdot 2 \cdot 7} - \sqrt{14}$

$3 \cdot 2\sqrt{7} - \sqrt{14}$

$6\sqrt{7} - \sqrt{14}$



f. $-4\sqrt{6}(3 + 5\sqrt{2})$

$(-4\sqrt{6} \cdot 3) + (-4\sqrt{6} \cdot 5\sqrt{2})$

$-12\sqrt{6} + -20\sqrt{12}$

$-12\sqrt{6} + -20\sqrt{2 \cdot 2 \cdot 3}$

$-12\sqrt{6} + -20 \cdot 2\sqrt{3}$

$-12\sqrt{6} + -40\sqrt{3}$

