

1. Simplify.

a). $2\sqrt{3} + 4\sqrt{3} + \sqrt{3}$

$$7\sqrt{3}$$

c). $-2\sqrt{5} + 7\sqrt{5} + 3\sqrt{5}$

$$8\sqrt{5}$$

e). $7\sqrt{7} - \sqrt{7} + 8\sqrt{7}$

$$14\sqrt{7}$$

2. Write as mixed radicals, then simplify.

a). $\sqrt{75} + \sqrt{150}$

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

c). $3\sqrt{32} - 4\sqrt{8} + 4\sqrt{50}$

$$24\sqrt{2}$$

e). $-5\sqrt{32} + 7\sqrt{2} - \sqrt{484}$

$$-13\sqrt{2} - 22$$

g). $6\sqrt{36} - 6\sqrt{48} - 5\sqrt{216}$

$$36 - 24\sqrt{3} - 30\sqrt{6}$$

b). $7\sqrt[3]{2} + 9\sqrt[3]{2} + 5\sqrt[3]{2}$

$$21\sqrt[3]{2}$$

d). $\sqrt{13} + 5\sqrt{13} - 6\sqrt{13}$

$$0$$

f). $\sqrt[3]{5} + 3\sqrt[3]{5} - 2$

$$4\sqrt[3]{5} - 2$$

b). $\sqrt[3]{40} - \sqrt[3]{135}$

$$-1\sqrt[3]{5}$$

d). $3\sqrt{18} - 6\sqrt{45} - 5\sqrt{108}$

$$9\sqrt{2} - 18\sqrt{5} - 30\sqrt{3}$$

f). $4\sqrt{104} - 6\sqrt{2} - \sqrt{242}$

$$8\sqrt{26} - 17\sqrt{2}$$

h). $2\sqrt[3]{16} + \sqrt[3]{375} - 4\sqrt[3]{54}$

$$-8\sqrt[3]{2} + 5\sqrt[3]{3}$$