Math 20-2            Name_____

# Radical Skills

Date_____

**Express as mixed radicals in simplest form.**

1) $\sqrt{294}$

2) $\sqrt{320}$

3) $\sqrt{50}$

4) $\sqrt{20}$

5) $\sqrt{512}$

6) $\sqrt{64}$

**Add and Subtract Radicals: express answers as mixed radicals in simplest form.**

7) $3\sqrt{2} + 3\sqrt{2}$

8) $3\sqrt{6} - 2\sqrt{6} + 3\sqrt{3}$

9) $3\sqrt{3} + 2\sqrt{2} + 2\sqrt{27} - \sqrt{6}$

10) $3\sqrt{2} - 3\sqrt{18} + 3\sqrt{54} - 2\sqrt{2}$

11) $3\sqrt{27} + 2\sqrt{45} + 3\sqrt{12} - \sqrt{3}$

12) $-\sqrt{45} + 3\sqrt{8} + 3\sqrt{6} + 3\sqrt{8}$

**What is the best answer?**

13) $2\sqrt{18} + 3\sqrt{2}$

  A) $12\sqrt{2}$      B) $9\sqrt{2}$

  C) $18\sqrt{2}$      D) $24\sqrt{2}$

14) $-2\sqrt{12} + 2\sqrt{45} + 2\sqrt{27} - 2\sqrt{20}$

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

  B) $2\sqrt{3} + 8\sqrt{5}$

  C) $-2\sqrt{3} + 14\sqrt{5}$

  D) $-2\sqrt{3} + 8\sqrt{5}$

# Answers to Radical Skills

1) $7\sqrt{6}$

2) $8\sqrt{5}$

3) $5\sqrt{2}$

4) $2\sqrt{5}$

5) $16\sqrt{2}$

6) $8$

7) $6\sqrt{2}$

8) $\sqrt{6} + 3\sqrt{3}$

9) $9\sqrt{3} + 2\sqrt{2} - \sqrt{6}$

10) $-8\sqrt{2} + 9\sqrt{6}$

11) $14\sqrt{3} + 6\sqrt{5}$

12) $-3\sqrt{5} + 12\sqrt{2} + 3\sqrt{6}$

13) B

14) A