Radicals worksheet

Solve:

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

2. $\sqrt{72} - 9\sqrt{2}$

$$3.\frac{-4\sqrt{28}}{\sqrt{4}}$$

 $4.\frac{7}{-6-\sqrt{3}}$

5. $11\sqrt{28} + \sqrt{7} + 2\sqrt{7}$	$63\sqrt[3]{-3} + 2\sqrt[3]{162} + 3\sqrt[3]{81}$
7. $4\sqrt[6]{3} + 2\sqrt[4]{32} - 3\sqrt[6]{192} - 2\sqrt[6]{192}$	8. $\frac{10}{\sqrt{7}-\sqrt{5}}$

9. $5\sqrt{3} - 3\sqrt{3} + 4\sqrt{8}$	10. $2\sqrt[3]{6} - \sqrt[6]{6} + 3\sqrt[3]{6} - 3\sqrt[6]{384}$
$11. \qquad -3\sqrt{24} - \sqrt{6}$	12. $\frac{\sqrt{3}}{9-4\sqrt{10}}$

Answers:

- 1. $4 + 3\sqrt{7}$
- **2.** $-3\sqrt{2}$
- 3. $-4\sqrt{7}$
- 4. $\frac{-42+7\sqrt{3}}{33}$
- **5.** $25\sqrt{7}$
- **6.** $6(\sqrt[3]{3} + \sqrt[3]{6})$
- **7.** $4\sqrt[4]{2} 6\sqrt[6]{3}$
- **8.** $5(\sqrt{7} + \sqrt{5})$
- **9.** $2\sqrt{3} + 8\sqrt{2}$
- **10.** $5\sqrt[3]{6} 7\sqrt[6]{6}$
- **11.** $-7\sqrt{6}$
- 12. $\frac{9\sqrt{3}+4\sqrt{3}0}{-79}$