Practice 17.4

Name_____

If possible, simplify the expression. If any variables exist, assume that they are positive.

1) $\sqrt{25} + \sqrt{16}$

2) $2\sqrt{3} + 2\sqrt{12}$

3) $6\sqrt{32x^2} - 3\sqrt{18x^2} - \sqrt{2x^2}$

4) $\frac{\sqrt{150}}{3} - \frac{4\sqrt{6}}{3} + \frac{\sqrt{6}}{\sqrt{9}}$

Perform the indicated operation.

5) Find (f - g)(x) if $f(x) = 9\sqrt{x} - 2$ and $g(x) = 2\sqrt{x} - 1$

6) Find (f + g)(x) if $f(x) = \sqrt{100x + 100}$ and $g(x) = \sqrt{x + 1}$

Multiply, then simplify the product. If variables are present, assume they are positive.

7) $(\sqrt{7} - 3)(\sqrt{5} + 6)$

8) $(\sqrt{6x} + y)(\sqrt{6x} - y)$

Rationalize the denominator.

9) $\sqrt{\frac{36}{11}}$

10) $\frac{4a}{\sqrt{5}}$

11) $\frac{5\sqrt{31x}}{\sqrt{x^3}}$

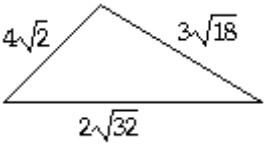
12) $\frac{2}{6 - \sqrt{3}}$

13) $\frac{10 - \sqrt{3}}{10 + \sqrt{3}}$

14) $\frac{\sqrt{3}}{3\sqrt{2} - \sqrt{3}}$

Find the exact perimeter. Then approximate your answer to the nearest tenth.

15)



Answer Key
Testname: WKS_17.4

1) 9
2) $6\sqrt{3}$
3) $14x\sqrt{2}$
4) $\frac{2\sqrt{6}}{3}$
5) $7\sqrt{x} - 1$
6) $11\sqrt{x + 1}$
7) $\sqrt{35} + 6\sqrt{7} - 3\sqrt{5} - 18$
8) $6x - y^2$
9) $\frac{6\sqrt{11}}{11}$
10) $\frac{4a\sqrt{5}}{5}$
11) $\frac{5\sqrt{31}}{x}$
12) $\frac{12 + 2\sqrt{3}}{33}$
13) $\frac{103 - 20\sqrt{3}}{97}$
14) $\frac{\sqrt{6} + 1}{5}$
15) $21\sqrt{2}$, 29.7