Geometry 1-2 Name_____

Assignment

Date_____ Period____

Simplify each expression. Leave your answers in simplest radical form.

1) $10\sqrt{800}$

$200\sqrt{2}$

2) $2\sqrt{70}$

$2\sqrt{70}$

3) $8\sqrt{63}$

$24\sqrt{7}$

4) $10\sqrt{384}$

$80\sqrt{6}$

5) $3\sqrt{42}$

$3\sqrt{42}$

6) $2\sqrt{216}$

$12\sqrt{6}$

7) $2\sqrt{448}$

$16\sqrt{7}$

8) $2\sqrt{210}$

$2\sqrt{210}$

9) $\sqrt{15}(3\sqrt{3}+2)$

$9\sqrt{5}+2\sqrt{15}$

10) $5\sqrt{2}(\sqrt{2}+2)$

$10+10\sqrt{2}$

11) $\sqrt{3}(\sqrt{3}+3)$

$3+3\sqrt{3}$

12) $-5\sqrt{3}(5+5\sqrt{3})$

$-25\sqrt{3}-75$

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

$4\sqrt{3}+3$

14) $\sqrt{10}(3+\sqrt{2})$

$3\sqrt{10}+2\sqrt{5}$

15) $-\sqrt{3}(3\sqrt{5}+\sqrt{3})$

$-3\sqrt{15}-3$

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

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

17) $\dfrac{\sqrt{2}}{2\sqrt{50}}$ $\dfrac{1}{10}$

18) $\dfrac{4\sqrt{15}}{5\sqrt{48}}$ $\dfrac{\sqrt{5}}{5}$

19) $\dfrac{5\sqrt{4}}{\sqrt{100}}$

1

20) $\dfrac{\sqrt{15}}{\sqrt{48}}$ $\dfrac{\sqrt{5}}{4}$

21) $\dfrac{\sqrt{25}}{\sqrt{10}}$ $\dfrac{\sqrt{10}}{2}$

22) $\dfrac{5}{\sqrt{3}}$ $\dfrac{5\sqrt{3}}{3}$

23) $\dfrac{\sqrt{4}}{3\sqrt{5}}$ $\dfrac{2\sqrt{5}}{15}$

24) $\dfrac{\sqrt{10}}{\sqrt{15}}$ $\dfrac{\sqrt{6}}{3}$

25) $\dfrac{-5-\sqrt{5}}{\sqrt{4}}$ $\dfrac{-5-\sqrt{5}}{2}$

26) $\dfrac{4-2\sqrt{3}}{\sqrt{16}}$ $\dfrac{2-\sqrt{3}}{2}$

27) $\dfrac{-5-\sqrt{5}}{\sqrt{9}}$ $\dfrac{-5-\sqrt{5}}{3}$

28) $\dfrac{2-\sqrt{5}}{\sqrt{4}}$ $\dfrac{2-\sqrt{5}}{2}$

29) $\dfrac{2+\sqrt{5}}{2\sqrt{12}}$ $\dfrac{2\sqrt{3}+\sqrt{15}}{12}$

30) $\dfrac{3+2\sqrt{5}}{5\sqrt{13}}$ $\dfrac{3\sqrt{13}+2\sqrt{65}}{65}$

31) $\dfrac{4+3\sqrt{2}}{\sqrt{2}}$
$2\sqrt{2}+3$

32) $\dfrac{4-2\sqrt{2}}{4\sqrt{17}}$ $\dfrac{2\sqrt{17}-\sqrt{34}}{34}$

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

34) $\sqrt{20}+\sqrt{45}$
$5\sqrt{5}$

35) $\sqrt{45}+\sqrt{6}+\sqrt{6}$
$3\sqrt{5}+2\sqrt{6}$

36) $\sqrt{3}+\sqrt{6}+\sqrt{27}$
$4\sqrt{3}+\sqrt{6}$

37) $\sqrt{24}+\sqrt{20}+\sqrt{2}+\sqrt{6}$
$3\sqrt{6}+2\sqrt{5}+\sqrt{2}$

38) $\sqrt{5}+\sqrt{18}+\sqrt{6}+\sqrt{18}$
$\sqrt{5}+6\sqrt{2}+\sqrt{6}$

39) $2\sqrt{6}-3\sqrt{18}-2\sqrt{54}$
$-4\sqrt{6}-9\sqrt{2}$

40) $3\sqrt{27}+3\sqrt{27}-2\sqrt{24}$
$18\sqrt{3}-4\sqrt{6}$

41) $2\sqrt{2}+2\sqrt{8}+3\sqrt{8}$
$12\sqrt{2}$

42) $-\sqrt{6}-\sqrt{24}-2\sqrt{24}$
$-7\sqrt{6}$

43) $-\sqrt{18}+3\sqrt{5}-2\sqrt{45}$
$-3\sqrt{2}-3\sqrt{5}$

44) $2\sqrt{2}+3\sqrt{2}-2\sqrt{3}$
$5\sqrt{2}-2\sqrt{3}$

Solve each proportion. Round your answers to the nearest hundredth, if necessary.

45) $\dfrac{n-2}{2}=\dfrac{n+6}{8}$
$\{4.66\}$

46) $\dfrac{2}{6}=\dfrac{a-1}{a-5}$
$\{-1\}$

47) $\dfrac{x+7}{7}=\dfrac{x+10}{3}$
$\{-12.25\}$

48) $\dfrac{2}{7}=\dfrac{v-8}{v+7}$
$\{14\}$

Solve each equation.

49) $8(k-3)-4=3(k+5)+2$
$\{9\}$

50) $-2(7x+7)=-8(x-5)$
$\{-9\}$