

2)	$\sqrt{5}$	19)	$\frac{3\sqrt{2}}{2}$	34)	$\frac{4+5\sqrt{2}}{2}$
4)	$13\sqrt{3}$	20)	$6-6\sqrt{2}$	36)	$5 y^2 \sqrt{5y}$
6)	$7\sqrt{3}-3\sqrt{7}$	22)	$21\sqrt{2}-7\sqrt{3}$	38)	$3 ab^2 \sqrt{2}$
8)	$5+6\sqrt{5}$	24)	$15+30\sqrt{15}$	40)	$\frac{5\sqrt{6x}}{6}$
10)	$3\sqrt{2}-\sqrt{6}$	26)	$\sqrt{6}-\sqrt{2}$	42)	$2k^3\sqrt{5}-5k\sqrt{2}$
12)	$5\sqrt{3}-2\sqrt{7}$	28)	$2-\sqrt{2}$	44)	$\sqrt{30}$
14)	$2\sqrt{6}$	30)	$\frac{7\sqrt{2}}{8}$		
16)	$\frac{7\sqrt{6}}{10}$	32)	$10+4\sqrt{25}$		

8) $\sqrt{5} + \sqrt{25} + \sqrt{125}$
 $\sqrt{5} + 5 + \sqrt{25 \cdot 5}$
 $\sqrt{5} + 5 + 5\sqrt{5}$
 $6\sqrt{5} + 5$

12) $\sqrt[3]{24} - \sqrt[3]{56} + \sqrt[3]{81}$
 $\sqrt[3]{8 \cdot 3} - \sqrt[3]{8 \cdot 7} + \sqrt[3]{27 \cdot 3}$
 $2\sqrt[3]{3} - 2\sqrt[3]{7} + 3\sqrt[3]{3}$
 $5\sqrt[3]{3} - 2\sqrt[3]{7}$

Cubes

1	1
2	8
3	27
4	64
5	125
6	216

14) $\sqrt{\frac{75}{2}} - \sqrt{\frac{3}{2}}$
 $\frac{\sqrt{75} - \sqrt{3}}{\sqrt{2}} = \frac{\sqrt{25 \cdot 3} - \sqrt{3}}{\sqrt{2}} = \frac{5\sqrt{3} - \sqrt{3}}{\sqrt{2}} = \frac{4\sqrt{3}\sqrt{2}}{\sqrt{2}\sqrt{2}}$
 $= \frac{4\sqrt{6}}{2} = 2\sqrt{6}$

16) $\sqrt{\frac{5 \cdot 5}{25}} + \sqrt{\frac{2 \cdot 2}{5 \cdot 2}}$
 $\frac{\sqrt{25}}{\sqrt{10}} + \frac{\sqrt{4}}{\sqrt{10}}$
 $\frac{5}{\sqrt{10}} + \frac{2}{\sqrt{10}} = \frac{7\sqrt{10}}{\sqrt{10}\sqrt{10}}$
 $\frac{7\sqrt{10}}{10}$

18) $\sqrt[3]{164} - \sqrt[3]{4}$
 $\frac{\sqrt[3]{64}}{\sqrt[3]{4}} - \frac{\sqrt[3]{1}}{\sqrt[3]{4}}$
 $\frac{4}{\sqrt[3]{4}} - \frac{1}{\sqrt[3]{4}} = \frac{3\sqrt[3]{2}}{\sqrt[3]{4}\sqrt[3]{2}}$
 $\frac{3\sqrt[3]{2}}{\sqrt[3]{8}} = \frac{3\sqrt[3]{2}}{2}$

28) $\frac{\sqrt{408} - 2\sqrt{51}}{\sqrt{102}}$
 $\frac{(\sqrt{8} - 2)\sqrt{51}}{\sqrt{2}\sqrt{51}}$
 $\frac{\sqrt{16} - 2\sqrt{2}}{\sqrt{2}}$
 $\frac{4 - 2\sqrt{2}}{2}$
 $2 - \sqrt{2}$

30) $\sqrt{\frac{3}{8}} \left(\sqrt{\frac{3}{4}} + \sqrt{\frac{2}{3}} \right)$
 $\frac{\sqrt{9}}{\sqrt{32}} + \frac{2\sqrt{4}}{\sqrt{8}\sqrt{4}}$
 $\frac{3}{\sqrt{32}} + \frac{4}{\sqrt{8} \cdot 2} = \frac{7}{\sqrt{16} \cdot 2}$
 $= \frac{7\sqrt{2}}{4\sqrt{2}\sqrt{2}} = \frac{7\sqrt{2}}{8}$

34) $\frac{\sqrt[3]{320} + \sqrt[3]{1250}}{2\sqrt[3]{5}}$
 $\frac{\sqrt[3]{64} + \sqrt[3]{250}}{2}$
 $\frac{4 + \sqrt[3]{125 \cdot 2}}{2}$
 $\frac{4 + 5\sqrt[3]{2}}{2}$

36) $y^2\sqrt{45y} + 2y\sqrt{5y^3}$
 $y^2\sqrt{9 \cdot 5y} + 2y\sqrt{5y \cdot y^2}$
 $3y^2\sqrt{5y} + 2|y^2|\sqrt{5y}$
 $5y^2\sqrt{5y}$

don't need absolute value because y^2 can't be negative

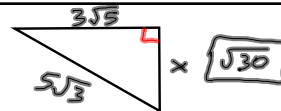
$$40) \frac{\sqrt{6x^6}}{\sqrt{6}} + \frac{\sqrt{2x^2}}{\sqrt{3 \cdot 2}} - \sqrt{\frac{3x \cdot 3}{2 \cdot 3}}$$

$$\frac{\sqrt{36x}}{\sqrt{6}} + \frac{\sqrt{4x}}{\sqrt{6}} - \frac{\sqrt{9x}}{\sqrt{6}}$$

$$\frac{6\sqrt{x} + 2\sqrt{x} - 3\sqrt{x}}{\sqrt{6}}$$

$$\frac{5\sqrt{x} \cdot \sqrt{6}}{\sqrt{6} \cdot \sqrt{6}} = \frac{5\sqrt{6x}}{6}$$

44)



$$a^2 + b^2 = c^2$$

$$(x)^2 + (3\sqrt{5})^2 = (5\sqrt{3})^2$$

$$x^2 + 45 = 75$$

$$\sqrt{x^2} = \sqrt{30}$$

$$|x| = \sqrt{30}$$

$$x = \pm\sqrt{30}$$