1.5 Homework Help

Pg. 53: 1-25

12. $2\sqrt[3]{40} = 2(2)\sqrt[3]{5}$

$= \boxed{4\sqrt[3]{5}}$

18. $7\sqrt[3]{96m^3} = 7(2)(m)\sqrt[3]{2\cdot 2\cdot 3}$

$= \boxed{14m\sqrt[3]{12}}$

22. $\sqrt{128x^3y^3} = 2\cdot 2\cdot 2|x||y|\sqrt{2\cdot x\cdot y}$

$= 8|x||y|\sqrt{2xy}$ or $\boxed{8|xy|\sqrt{2xy}}$

Pg. 63

3. $-\sqrt{12} + 3\sqrt{3} = -2\sqrt{3} + 3\sqrt{3} = \boxed{\sqrt{3}}$

8. $-3\sqrt{3} - \sqrt{8} - 3\sqrt{3}$

$= -3\sqrt{3} - 2\sqrt{2} - 3\sqrt{3}$ *common terms

$= \boxed{-6\sqrt{3} - 2\sqrt{2}}$

12. $\sqrt[3]{3}\cdot\sqrt[3]{9} = \sqrt[3]{3\cdot 9} = \boxed{3}$

18. $\sqrt{3}(-5\sqrt{10} + \sqrt{6})$

$= -5\sqrt{3\cdot 10} + \sqrt{3\cdot 6}$

$= -5\sqrt{30} + \sqrt{18}$

$= \boxed{-5\sqrt{30} + 3\sqrt{2}}$

25. $(2+\sqrt{5})(2-\sqrt{5})$

$= 4 - 2\sqrt{5} + 2\sqrt{5} - \sqrt{25}$

$= 4 - \sqrt{25}$

$= 4 - 5 = \boxed{-1}$

29. $\sqrt{\sqrt[4]{3}}$

$= \sqrt{3^{\frac{1}{4}}} = \left(3^{\frac{1}{4}}\right)^{\frac{1}{2}}$

$= \boxed{3^{\frac{1}{8}}}$