

9.  $5\sqrt{32} + \sqrt{27} + 2\sqrt{75}$   
 $5 \cdot 4\sqrt{2} + 3\sqrt{3} + 2 \cdot 5\sqrt{3}$   
 $20\sqrt{2} + 13\sqrt{3}$

10.  $4\sqrt{40} + 3\sqrt{28} - \sqrt{200}$   
 $4 \cdot 2\sqrt{10} + 3 \cdot 2\sqrt{7} - 10\sqrt{2}$   
 $8\sqrt{10} + 6\sqrt{7} - 10\sqrt{2}$

11.  $(4 + 2\sqrt{5})(3\sqrt{3} + 4\sqrt{5})$   
 $12\sqrt{3} + 16\sqrt{5} + 6\sqrt{15} + 8\sqrt{25}$   
 $12\sqrt{3} + 16\sqrt{5} + 6\sqrt{15} + 40$

13.  $\frac{5}{\sqrt{2} + 3} \cdot \frac{(\sqrt{2} - 3)}{(\sqrt{2} - 3)}$   
 $\frac{5\sqrt{2} - 15}{2 - 9} = \frac{5\sqrt{2} - 15}{-7}$   
 $\frac{15 - 2\sqrt{2}}{7}$

15.  $\frac{4 + \sqrt{2}}{\sqrt{2} - 3} \cdot \frac{(\sqrt{2} + 3)}{(\sqrt{2} + 3)} = \frac{4\sqrt{2} + 12 + 2 + 3\sqrt{2}}{2 + 3\sqrt{2} - 3\sqrt{2} - 9}$   
 $\frac{7\sqrt{2} + 14}{-7} = \frac{7\sqrt{2}}{-7} + \frac{14}{-7} = -2 - \sqrt{2}$

28.

29.

22.  $\frac{\sqrt{5a^5} \sqrt{b}}{\sqrt{b^{13}} \sqrt{b}} = \frac{\sqrt{5a^5 b}}{\sqrt{b^{14}}}$   
 $\frac{a^2 \sqrt{5ab}}{|b^7|}$

24.  $\frac{\sqrt[3]{6x^2} \sqrt[3]{25y^2}}{\sqrt[3]{5y} \sqrt[3]{25y^2}} = \frac{\sqrt[3]{150x^2 y^2}}{5y}$

26.  $3\sqrt{5y} \cdot 8\sqrt{10yz}$   
 $24\sqrt{50yz^2}$   
 $24 \cdot 5y\sqrt{2z}$   
 $120y\sqrt{2z}$

28.  $6\sqrt{3ab} \cdot 4\sqrt{24ab^3}$   
 $24\sqrt{72a^2 b^4}$   
 $24 \cdot 6ab^2\sqrt{2}$   
 $144|a|b^2\sqrt{2}$

<p>30. <math>3\sqrt{90} + 4\sqrt{20} + \sqrt{162}</math>  <math>9\sqrt{10} + 8\sqrt{5} + 9\sqrt{2}</math></p>	<p>32. <math>4\sqrt{28} - 8\sqrt{10} + \sqrt{44}</math>  <math>4 \cdot 2\sqrt{7} - 8 \cdot 9\sqrt{10} + 2\sqrt{11}</math>  <math>8\sqrt{7} - 72\sqrt{10} + 2\sqrt{11}</math></p>	<p>34. <math>\sqrt{6} + \sqrt{6} + 8 + \sqrt{3} + 8\sqrt{3}</math>  <math>2\sqrt{6} + 2\sqrt{3} + 16</math></p>
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<p>35. <math>\sqrt{6} (8 + \sqrt{3})</math>  <math>8\sqrt{6} + \sqrt{18}</math>  <math>8\sqrt{6} + 3\sqrt{2}</math></p>	<p>37. <math>(7\sqrt{2} - 3\sqrt{3})(4\sqrt{6} + 3\sqrt{12})</math>  <math>28\sqrt{12} + 21\sqrt{24} - 12\sqrt{18} - 9\sqrt{36}</math>  <math>28 \cdot 2\sqrt{3} + 21 \cdot 2\sqrt{6} - 12 \cdot 3\sqrt{2} - 9 \cdot 6</math>  <math>56\sqrt{3} + 42\sqrt{6} - 36\sqrt{2} - 54</math></p>
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<p>48. <math>\sqrt[4]{48a^9b^{13}c^{16}}</math>  <math>\sqrt[4]{16 \cdot 3a^8 \cdot a \cdot b^{12} \cdot b \cdot c^{16}}</math>  <math>2a^2b^3c^4\sqrt{3ab}</math></p>	<p>55. <math> a </math>  56. <math>a^4</math>  57. <math>a^2</math>  58. <math> a^3 </math></p>
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<p>60. Twyla is correct  <math>\sqrt{16}</math> is 4, Ben did not root 16 or 9.</p>	<p>66. There are 3 values less than 4  <math>\frac{3}{6} = \frac{1}{2}</math>  A</p>
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<p>67.</p> <p style="text-align: center;">G</p>	<p>81. <math>1500m + 2500g = 23500</math>  <math>m - g = 5</math>  <hr style="width: 50%; margin-left: auto; margin-right: auto;"/> 4 large decks, 9 small decks</p>
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