Algebra I Practice N.RN.B.3: Operations with Radicals 2
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NAME:_____

Simplify:

1. $\sqrt{7} \cdot \sqrt{35}$

   [A] $49\sqrt{5}$ [B] 245 [C] $7\sqrt{5}$ [D] 7

2. $\sqrt{5} \cdot \sqrt{15}$

   [A] 5 [B] $25\sqrt{3}$ [C] 75 [D] $5\sqrt{3}$

3. $\sqrt{11} \cdot \sqrt{22}$

   [A] $121\sqrt{2}$ [B] 242

   [C] $11\sqrt{2}$ [D] 11

4. $\sqrt{3} \cdot \sqrt{15}$

   [A] $3\sqrt{5}$ [B] 3 [C] $9\sqrt{5}$ [D] 45

5. Find the product and completely simplify the radical expression $\sqrt{12} \cdot \sqrt{30}$.

6. Find the product and completely simplify the radical expression $\sqrt{10} \cdot \sqrt{12}$.

7. Find the product and completely simplify the radical expression $\sqrt{10} \cdot \sqrt{60}$.

8. Find the product and completely simplify the radical expression $\sqrt{60} \cdot \sqrt{30}$.

9. Find two pairs of integers *a* and *b* such that $\sqrt{a} \cdot \sqrt{b} = 3\sqrt{2}$.

10. Aaron simplified $\sqrt{14} \cdot \sqrt{12}$ and got 12.96. Alison simplified the same expression and got $2\sqrt{42}$. Use a calculator to determine who got the correct answer.

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[1] C

[2] D

[3] C

[4] A

[5] $6\sqrt{10}$

[6] $2\sqrt{30}$

[7] $10\sqrt{6}$

[8] $30\sqrt{2}$

[9] Answers may vary. Sample:
$a = 2,\ b = 9;\ a = 6,\ b = 3$

[10] They are both correct since $2\sqrt{42} \approx 12.96$.