Algebra II Practice A.REI.A.2: Solving Radicals 3

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NAME:_____

Solve:

1. $x^{\frac{3}{4}} = 2$

2. $x^{\frac{6}{5}} = 81$

3. $x^{\frac{5}{4}} = 48$

4. $x^{\frac{7}{4}} = 8$

5. $5x^{\frac{3}{7}} = 2$

   [A] 0.12 [B] 8.48 [C] 0.68 [D] 1.48

6. $3x^{\frac{4}{5}} = 48$

   [A] 0.03 [B] 9.19 [C] 0.11 [D] 32.00

7. $4x^{\frac{6}{5}} = 64$

   [A] 0.10 [B] 27.86

   [C] 10.08 [D] 0.04

8. $7x^{\frac{4}{7}} = 128$

   [A] 5.26 [B] –1.25

   [C] 0.19 [D] 161.69

9. A weather station reported data on tropical storms during one month.

Storm	**Duration, T**
Storm A	8 hours
Storm B	10.5 hours
Storm C	20 hours

   Estimate the diameter D in miles of all three storms using the formula $D^3 = 216T^2$.

10. If the diameter of a storm is 30 miles, how long might it last in hours? Use the formula $D^3 = 216T^2$ where D is the diameter in miles and T is the duration in hours.

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[1] 2.52

[2] 38.94

[3] 22.13

[4] 3.28

[5] A

[6] D

[7] C

[8] D

[9] 24 miles; 28.8 miles; 44.2 miles

[10] 11.2 hours