Name _____ Date _____ Class _____

Select the best answer.

1. What is the sum of all the solutions of the equation $\frac{4}{x} + \frac{4}{2x + 3} = 9$?

   A $-\frac{5}{6}$

   B $\frac{1}{3}$

   C $\frac{1}{2}$

   D $\frac{11}{6}$

2. A pool has three drains. The largest can drain the pool in 6 hours, the smallest can drain the pool in 12 hours. The other can drain the pool in 8 hours. How long will it take to drain the pool if all three drains are open?

   F 2 hours and 20 minutes

   G 2 hours and 40 minutes

   H 3 hours

   J 3 hours and 20 minutes

3. Which expression is equal to

   $\frac{(\sqrt{xy})\left(\sqrt[4]{x^2y}\right)}{xy}$?

   A $y^{-\frac{1}{4}}$
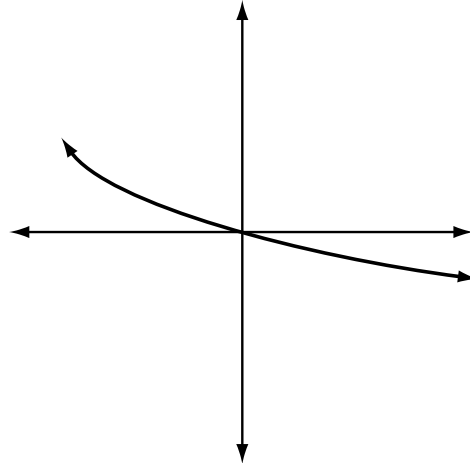
   B $x^{\frac{1}{4}}y^{-\frac{1}{4}}$

   C $x^{\frac{3}{4}}y^{-\frac{1}{4}}$

   D $x^{\frac{3}{4}}y^{\frac{1}{4}}$

4. Which of the following is equal to an integer?

   F $\frac{\sqrt[3]{32}\,\sqrt[6]{4}}{\sqrt{2}}$

   G $\frac{\sqrt{8}\,\sqrt[3]{16}}{\sqrt[6]{2}}$

   H $\frac{\sqrt[3]{2}\,\sqrt[2]{32}}{\sqrt[6]{16}}$

   J $\frac{\sqrt{2}\,\sqrt[3]{4}}{\sqrt[6]{2}}$

5. Which of the following could be the equation for the graph?

   A $f(x) = -\sqrt{x + 2} + 1$

   B $f(x) = \sqrt{2 - x} + 1$

   C $f(x) = -\sqrt{x + 4} + 2$

   D $f(x) = \sqrt{4 - x} + 2$

6. Solve $\sqrt{36x - 9} = 3\sqrt{4x - 2}$.

   F 0.125

   G 0.25

   H all real numbers

   J no solution

7. Which of the following is an extraneous solution to $\sqrt{5x + 1} = 2x - 2$?

   A $x = \frac{1}{4}$

   B $x = 3$

   C $x = \frac{1}{4}$ and $x = 3$

   D There is no extraneous solution.

8. What is the solution set to the equation $3x - 5 = (6x + 5)^{\frac{1}{2}}$?

   F $\left\{\frac{2}{3}\right\}$

   G $\left\{\frac{10}{3}\right\}$

   H $\left\{\frac{2}{3}, \frac{10}{3}\right\}$

   J no solution

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Answer Key continued

CHAPTER 8

Section Quiz: Section A

1. A
2. F
3. C
4. F
5. B
6. G
7. D
8. G
9. A

Section Quiz: Section B

1. A
2. G
3. A
4. J
5. C
6. J
7. A
8. G

Chapter Test Form A

1. A
2. C
3. B
4. A
5. A
6. A
7. D
8. B
9. A
10. A
11. A

12. D
13. B
14. A
15. A
16. A
17. B
18. B
19. A
20. A

Chapter Test Form B

1. A
2. G
3. B
4. F
5. C
6. F
7. A
8. F
9. C
10. F
11. D
12. J
13. A
14. H
15. C
16. J
17. A
18. F
19. B
20. H

Chapter Test Form C

1. A
2. G

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