Algebra 2B Chapter 7 Review1

NON-CALCULATOR SECTION

Graph the function.

1. $y = -0.5\sqrt{x - 2} - 3$
2. $y = \sqrt{x - 3}$
3. $y = -3\sqrt{x}$
4. $y = \sqrt{x} + 2$
5. $y = -2\sqrt[3]{x + 1} - 3$
6. Write $(27a^{-3})^{-\frac{2}{3}}$ in simplest form.
7. Rewrite $y = \sqrt{25x - 75} + 5$ to make it easy to graph using a translation. Describe the graph.

Simplify.

8. $19^{\frac{1}{2}} \cdot 19^{\frac{1}{2}}$
9. $27^{\frac{2}{3}}$

Solve the equation.

10. $(x + 10)^{\frac{2}{3}} = 9$

CALCULATOR SECTION

11. $\sqrt{x + 4} - 5 = 2$
12. $(-7x - 3)^{\frac{1}{2}} = (9 + 2x)^{\frac{1}{2}}$
13. Write the exponential expression $5x^{\frac{5}{9}}$ in radical form.
14. Let $f(x) = 2x - 6$ and $g(x) = 5x - 7$. Find $f \cdot g$ and its domain.
15. Let $f(x) = 6x + 2$ and $g(x) = 4x + 5$. Find $f(x) + g(x)$.
16. Let $f(x) = 3x + 7$ and $g(x) = -2x - 5$. Find $(f \circ g)(-4)$.
17. Graph the relation and its inverse. Use open circles to graph the points of the inverse.

x	−6	−3	−1	4
y	−3	3	6	−2

18. Graph $y = 4x^2 + 2$ and its inverse.
19. For the function $f(x) = (3 - 8x)^2$, find f^{-1}. Determine whether f^{-1} is a function.
20. Find the inverse of $y = 4x^2 - 7$.