LESSON 81 Review Quiz

Take the quiz and record your score on your grading sheet. You may use a calculator unless otherwise specified. After the quiz, make sure you review what you missed.

1. $(a+b)^2-(a-b)^2=2ab$

Determine if the equation above is an identity.

2. x^3-27

Factor the polynomial above completely.

3. $x^4-2x^2-3=0$

Find the solutions to the equation above.

4. $x^3-2x^2=4x-8$

Find the solutions to the equation above and state their multiplicity.

5. Write a polynomial equation of least degree in standard form whose leading coefficient is 1 and whose solutions are 0, $2i$, and $-2i$.

6. Write a polynomial equation of least degree in standard form whose leading coefficient is 1 and whose solutions are -1 with multiplicity 2 and -2 with multiplicity 1.

7. The graph of $f(x)$ has x-intercepts at 2, 3, and -3. Which could be $f(x)$?

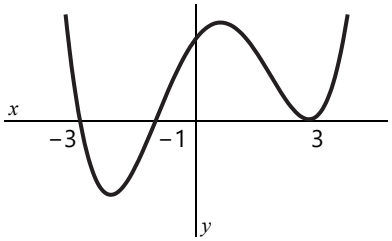
A) $f(x)=(x+2)(x^2+9)$

B) $f(x)=(x-2)(x^2+9)$

C) $f(x)=(x+2)(x^2-9)$

D) $f(x)=(x-2)(x^2-9)$

8. Which function could be graphed below?



A) $f(x)=(x+3)(x+1)(x-3)$

B) $f(x)=(x+3)^2(x+1)(x-3)$

C) $f(x)=(x+3)(x+1)^2(x-3)$

D) $f(x)=(x+3)(x+1)(x-3)^2$

9. $f(x)=x^4+x^3-x^2-x$

Find the zeros of the function above. At each zero, state the multiplicity and if the graph touches or crosses the x-axis.

10. Write a polynomial function in standard form with zeros 0, -1, and 3 whose graph passes through $(1, 8)$.