

Standard #11 Model Assessment Items

Computational and Procedural Skills

1. Factor the following completely. If not possible, write “Prime”.

A. $x^2 + 2x$

F. $3x^2 - 15x + 18$

B. $x^2 + 6x + 7$

G. $x^2 + 5x + 2$

C. $m^2 - 25$

H. $x^3 + 2x^2 - x - 2$

D. $4z^2 + 24z - 13$

I. $3x^2 - 27$

E. $x^3 + 2x^2 - 3x$

Conceptual Understanding

1. How can you check your answer when you factor a polynomial?
2. Given the expression $5y(2x - 3) + 8(2x - 3)$, is the expression completely factored? If not, what is the next step in factoring this expression.
3. If you are asked to completely factor the polynomial $3x^2 + 9x - 12$, why would it be incorrect to give $(x - 1)(3x + 12)$ as your answer?

Problem Solving/Applications

1. Find a value of b so that $x^2 + bx + 25 = (x + 5)^2$.
2. Find a so that $ay^2 - 12y + 4 = (3y - 2)^2$.