


# ALGEBRA CRAZINESS! UNDERSTANDING ERRORS CAUSED BY LACK OF UNDERSTANDING

Craziness!	What the Student Failed to Understand	Correct Response
<p>(a) Perimeter</p> $= 6y + (6y + 2y + 3) + (2y + 3) + (9x - 1) + 4x + (9x - 1 + 4x)$ $= 6y + 11y + 5y + 8x + 4x + 12x$ $= 28y + 24x$ <p><math>-2A</math></p>		
<p>(c) <math>-(5a^2b + 3ab) - (6a^2b - 7ab)</math></p> $= -(7a^3b^2) + (-6)a^2b + (-7)ab$ $= -(7a^3b^2) + -13a^3b^2$ $= -20a^6b^4$ <p><math>-4k</math></p>		

Craziness!	What the Student Failed to Understand	Correct Response
<p>Continuation of question 2.</p> <p>(e) <math>-2b^3(5a^2b^3 + 3a^3b) - 5a(6a^2b^4 - 7ab^6)</math></p> <p><math>= (-5a^2)(-2b^3)(b^3)(-2b^3)</math></p> <p><math>= (-10a^2b^3)(2b^9)</math></p> <p><math>= (20a^2b^{12}) + (-6a^3b^4) + -5a(6a^2b^4 + 7ab^6)</math></p> <p><math>= (20a^2b^{12}) + (-6a^3b^4) + (-30a^3b^4) + (-35a^2b^6)</math></p> <p><math>= (14a^5b^{16}) + (-65a^5b^{10})</math></p> <p><math>= -51a^5b^{26}</math></p> <p style="text-align: right;">(-6k)</p>		
<p>(d) <math>\frac{32b^9d^2(-b^{-1}d^4)}{3^{-2}(2b^3d)^{-1}(35abc)^0}</math></p> <p><math>\frac{32(bbbbbbbbbb)(b)(dd)(dddd)}{(\frac{1}{3^2})[(2)(\frac{1}{(2b^3d)})](0)}</math></p> <p><math>= \frac{32 - b^{10}d^6}{\frac{1}{9} \cdot [2 \frac{2}{b^3d}]}</math></p> <p><math>= \frac{32 - b^{10}d^6}{\frac{1}{9}(\frac{4}{2b^3d})}</math></p> <p><math>= \frac{32 - b^{10}d^6}{\frac{1}{9} \cdot \frac{2}{b^3d}}</math></p> <p><math>= \frac{32 - b^{10}d^6}{\frac{2}{9b^3d}}</math></p> <p><math>= \frac{32 - b^{10}d^6}{4.5b^3d}</math></p> <p><math>\doteq 7 - b^7d^5</math></p>		