Two Truths and a Lie

Name_____
Hour_____

Each of the following statements contains two truths and one lie. Your job is to correctly identify which is which and justify your answer by describing the mistake that was made.

Two truths & a Lie	Justification
Properties of Zero A) $\frac{0}{2} = 0$ B) $0 \times 2 = 0$ C) $\frac{2}{0} = 0$	
Operations A) $10 \div \frac{1}{2} = 20$ B) $12 \div 2(1+2) = 2$ C) $10 \div 5 + \lvert 3-4 \rvert = 3$	
Radicals (Square roots) A) $-\sqrt{25} = -5$ B) $\sqrt{\frac{4}{9}} = \frac{2}{3}$ C) $\sqrt{-16} = -4$	
Fractions A) $\frac{2}{3} \times \frac{1}{6} = \frac{2}{6}$ B) $\frac{2}{3} + \frac{1}{6} = \frac{5}{6}$ C) $\left(\frac{3}{5}\right)^2 = \frac{9}{25}$	
Expanding A) $(x+2y)^2 = x^2 + 4y^2$ B) $(2x+3)(2x-1) = 4x^2 + 4x - 3$ C) $-3(-4x+1) = 12x - 3$	
Adding/Subtracting Polynomials A)$(2y^3 - 2y + 5) + (3y^3 + 7y + 2) = 5y^3 + 5y + 7$ B)$(3x^2 + 12) - (4x^2 + 12x - 3) = -x^2 + 12x + 15$ C)$(-8m^2 + 4) - (7m^2 - 3) = -15m^2 + 7$	

Extra Practice

a) $54 - 6 \div 2 + 6 = ?$

b) $-\sqrt{144} = ?$

c) $\frac{1}{2} + \left(\frac{2}{3} \div \frac{3}{4}\right) - \left(\frac{4}{5} \times \frac{5}{6}\right) = ?$

d) Simplify $\left(\frac{1}{2}y\right)^3$

e) $\frac{9}{6} = \frac{x}{8}$. Solve the proportion for x.

f) $\sqrt[3]{-8} = ?$

g) $\frac{1}{2}\left(\frac{3}{8}\right) - 1 = ?$

h) Expand $\frac{1}{2}\left(3x - \frac{15}{2}\right)$

i) Simplify $3a + 4b - (-6a - 3b)$