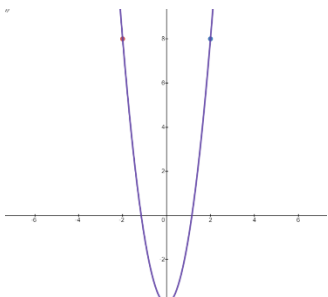


# What is Wrong?

In the following find what is wrong with the work and fix it.  
Then try solving them yourselves.

<p>Simplify the algebraic expression</p> $\frac{x^3y + 3x^2y^2}{x^2 - 9y^2} = \frac{x^2y(x + 3y)}{(x^2 - 9y^2)}$ $= \frac{x^2y(x+3y)}{(x+3y)(x+3y)}$ $= \frac{x^2y}{x+3y}$	<p>Simplify the algebraic expression</p> $\frac{x\sqrt{2} - 2\sqrt{2}}{\sqrt{2x} + 2} = \frac{\sqrt{2} * (x - 2)}{\sqrt{2} * (\sqrt{x} + 2)}$ $= \frac{x-2}{\sqrt{x}+2}$ $= \frac{x-2}{\sqrt{x}+2} * \frac{\sqrt{x}-2}{\sqrt{x}-2}$ $= \frac{(x-2)*(\sqrt{x}-2)}{x-4}$
<p>Simplify into one fraction</p> $\frac{2x + a}{4} - \frac{3}{2a}$ $\frac{2x + a}{4} \left(\frac{2a}{2a}\right) - \frac{3}{2a} \left(\frac{4}{4}\right)$ $\frac{2ax + 2a^2}{8a} - \frac{12}{8a}$ $\frac{2ax + 2a^2 - 12}{8a}$ $\frac{ax + a^2 - 6}{4a}$	<p>A store sells 17 coffee mugs for \$169. Some of the mugs are \$12 each and some are \$7 each. How many \$7 coffee mugs were sold?</p> <p>Writing two equations to represent the problem,  <math>x + y = 17</math>      <math>12x + 7y = 169</math></p> <p>Solving for the first equation we get, <math>x = y - 17</math>          Then we plug it in,</p> $12(y - 17) + 7y = 169$ $12y - 204 + 7y = 169$ $19y = 373$ <p>Thus, <math>y \approx 20</math></p>
<p>Graph the Function  <math>f(x) = x^2 + 4</math>          Notice that it will open upwards          Since <math>x^2</math> is by itself <math>h=0</math> thus vertex is <math>(0, -4)</math>          So we can plug in a couple of point such as <math>x= -4, 4</math></p> $f(-2) = (-2)^2 + 4 = 8$ $f(2) = (2)^2 + 4 = 8$ <p>Thus,  <math>(-2,8)</math> and <math>(2,8)</math></p> 	<p>If <math>n = 2^3</math>, then <math>n^n = ?</math></p> <p>Since <math>n = 2^3</math>, then</p> $n^n = (2^3)^3$ $= (8)^3$ $= 512$