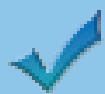


What's the Score?



- If you have any difficulty with these solutions, please contact your teacher before continuing.

4. To find the non-permissible values *before* you simplify is important because you are cancelling factors when you simplify. This cancelling may eliminate some of the factors that produce the non-permissible values. If you find the non-permissible values *after* simplifying, you will have “lost” some of the non-permissible values. For example, in 2(a) shown on the previous page, you would not have  $x \neq 0$  if you found the non-permissible values after simplifying.

5. a.  $\frac{18a^2}{12a - 24a^2}$

$$= \frac{18a^2}{12a(1 - 2a)}$$

$$= \frac{6a(3a)}{6a(2)(1 - 2a)}$$

$$= \frac{\cancel{6a}(3a)}{\cancel{6a}(2)(1 - 2a)}$$

$$= \frac{3a}{2(1 - 2a)}, \quad a \neq 0, \frac{1}{2}$$

b.  $\frac{1 - 36y^2}{12y^2 - 2y}$

$$= \frac{(1 - 6y)(1 + 6y)}{2y(6y - 1)}$$

$$= \frac{-1(\cancel{1 - 6y})(1 + 6y)}{2y(\cancel{6y - 1})}$$

$$= \frac{-(1 + 6y)}{2y}, \quad y \neq 0, \frac{1}{6}$$

c.  $\frac{5 + x}{3x^2 - 75}$

$$= \frac{5 + x}{3(x^2 - 25)}$$

$$= \frac{5 + x}{3(x - 5)(x + 5)}$$

$$= \frac{\cancel{1}\cancel{5} + x}{3(x - 5)(\cancel{x} + \cancel{5})}$$

$$= \frac{1}{3(x - 5)}, \quad x \neq 5, -5$$