

**Quiz #1 Solutions**

1. Simplify the following expression:

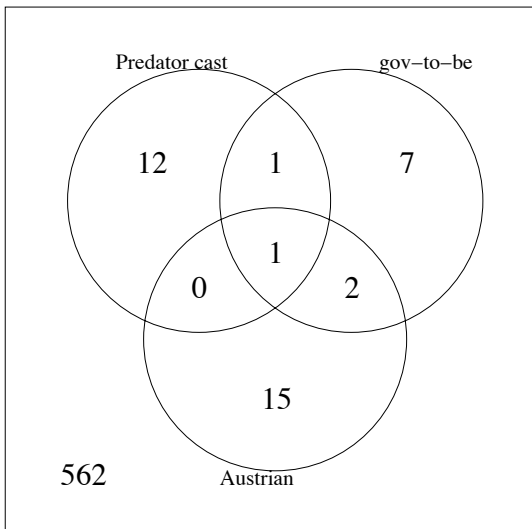
$$\begin{aligned}\frac{(a^{-6}b)(a^2b^3)}{(a^2b^{-1})^2} &= \frac{a^{-4}b^4}{a^4b^{-2}} \\ &= a^{-4-4}b^{4-(-2)} \\ &= a^{-8}b^6\end{aligned}$$

2. Solve the following equation for  $x$ :

$$\begin{aligned}\frac{x+2}{4} &= x-1 \\ x+2 &= 4(x-1) \\ x+2 &= 4x-4 \\ 2 &= 3x-4 \\ 6 &= 3x \\ 2 &= x\end{aligned}$$

3. In a parallel universe, Predator was nominated for several Oscars in 1987. The following information was gathered concerning the 600 people in attendance:

- 14 people were members of the Predator cast
- 18 people were Austrian
- 11 people were governors-to-be
- 1 member of the Predator cast was Austrian
- 2 members of the Predator cast were governors-to-be
- 3 of the governors-to-be were Austrian
- 1 Austrian member of the Predator cast was a governor-to-be



1. How many people that were not part of the Predator cast were governors-to-be or Austrian?  
 $15 + 2 + 7 = 24$
2. How many people in attendance were not Austrian, not governors-to-be, and not members of the Predator cast?    562