

To solve an absolute value equation of the form $|u| = c$ (where $c > 0$), we must account for the fact that the expression inside the absolute value bars can be either positive or negative. The absolute value function strips away directional signs, meaning the quantity inside the bars could equal 4 or -4 . This splits the problem into two distinct linear equations that must be solved independently:

Case 1: The positive scenario

$$6x + 18 = 4$$

1. **Factor or Isolate:** Pull out the greatest common factor to simplify, or directly subtract 18 from both sides. Following the image's layout: $6(x + 3) = 4$
2. **Divide by 6:** $x + 3 = \frac{4}{6}$
3. **Isolate x:** Subtract 3 from both sides:

$$x = \frac{2}{3} - 3 = -\frac{7}{3}$$

Case 2: The negative scenario

$$6x + 18 = -4$$

1. **Factor or Isolate:** $6(x + 3) = -4$
2. **Divide by 6:** $x + 3 = -\frac{4}{6}$
3. **Isolate x:** Subtract 3 from both sides:

$$x = -\frac{2}{3} - 3 = -\frac{11}{3}$$

Combining both valid solutions gives our complete solution set: $x = -\frac{7}{3}$ and $x = -\frac{11}{3}$.