

# Translate Into Algebraic Equation or Inequality Worksheet Answer Key

## *You'll Finish This in < No Time*

Translate the following statements into algebraic equations or inequalities.

- |   |   |
|---|---|
| 1. Four times a number is 20 more than the number.<br>$4x = x + 20$   | $\frac{x}{8} > x - 4$   |
| 2. The product of a number and its square is less than 8.<br>$x(x^2) < 8$   | 7. A number combined with the difference of three times the number and 7 yields 4.<br>$n + (3n - 7) = 4$  |
| 3. Sam has 15 coupons. If Billy collects 5 more coupons, he would have two more than one third of Sam's coupons.<br>Let $b$ be the number of coupons Billy has; $b + 5 = 2 + \frac{1}{3}(15)$ . | 8. Sarah covered 3 miles by walking at 3 miles per hour for 20 minutes and running at 5 miles per hour.<br>Let $t$ min be the time spent by Sarah on running; $3\left(\frac{1}{3}\right) + 5(t) = 3$            |
| 4. Five more than twice a number is less than one more than six times the number.<br>$5 + 2n < 1 + 6n$  | 9. The sum of four consecutive even integers is 44<br>$2n + (2n + 2) + (2n + 4) + (2n + 6) = 44$ .  |
| 5. Ten less than the product of 8 and a number is 38.<br>$8y - 10 = 38$   | 10. The cost of downloading a song is \$1.29 for the first song and 80¢ for each additional song. How many songs can you download under \$10?<br>Let $x$ be the number of additional songs; $1.29 + 0.80x < 10$ |
| 6. The ratio of a number and 8 is greater than 4 less than the number.  |   |

---

©2012 Shmoop University, Inc. All rights reserved. For classroom use only. Want to print this out for your classroom? Go for it. All other reproduction and distribution is prohibited.

<http://www.shmoop.com/algebra/>  
Shmoop will make you a better lover (of literature, math, life...)