

# 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.

$$4x = x + 20$$

2. The product of a number and its square is less than 8.

$$x(x^2) < 8$$

3. Sam has 15 coupons. If Billy collects 5 more coupons, he would have two more than one third of Sam's coupons.

Let  $b$  be the number of coupons Billy has;  $b + 5 = 2 + \frac{1}{3}(15)$ .

4. Five more than twice a number is less than one more than six times the number.

$$5 + 2n < 1 + 6n$$

5. Ten less than the product of 8 and a number is 38.

$$8y - 10 = 38$$

6. The ratio of a number and 8 is greater than 4 less than the number.

$$\frac{x}{8} > x - 4$$

7. A number combined with the difference of three times the number and 7 yields 4.

$$n + (3n - 7) = 4$$

8. Sarah covered 3 miles by walking at 3 miles per hour for 20 minutes and running at 5 miles per hour.

Let  $t$  min be the time spent by Sarah on running;  $3\left(\frac{1}{3}\right) + 5(t) = 3$

9. The sum of four consecutive even integers is 44

$$2n + (2n + 2) + (2n + 4) + (2n + 6) = 44.$$

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?

Let  $x$  be the number of additional songs;  $1.29 + 0.80x < 10$

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