EXERCISE A
Draw a real-number line and label the points with the following coordinates: $-5, -3, 0, 3, 5$.

The distance between any two real numbers is the absolute value of their difference. For example, the distance between $3$ and $5$ is $2$, so $|5 - 3| = 2$ and $|3 - 5| = 2$.

- $| -3 - 5|$ represents the distance between _____ and _____, so $| -3 - 5| = ____$.
- $|5 + 3|$ represents the distance between _____ and _____, so $|5 + 3| = ____$.
- $| -3 + 5|$ represents the distance between _____ and _____, so $| -3 + 5| = ____$.

Write your solutions to Exercises B and C on your own paper, or on the back of this sheet.

EXERCISE B
Draw a picture for each of the following inequalities that depicts each inequality geometrically; in each case, specify in your picture where the unknown quantity could lie on the real-number line.

1. $|x - 3| \leq 2$
2. $|x - 3| < 2$
3. $|x - 3| > 2$
4. $0 < |x - 3| < 2$
5. $0 < |a - 2| < 1$
6. $1 < |b + 1| \leq 2$
7. $2 < |b + 1| \leq 1$
8. $-1 \leq |c + 1| \leq 2$
9. $0 \leq |d + 1| < \infty$
10. $|a^2 + 2| < |a^2 + 1|$
11. $0 \leq |b - 1| - 1 | < 1$
12. $1 < |c - 1| + |c - 2| < 2$

EXERCISE C
Write your solutions to Exercise B algebraically, i.e., with an equation or inequality. (Solve algebraically if you feel you need to do so.)