UNIT 3 • COORDINATE GEOMETRY AND LINEAR **G–**
SYSTEMS

Practice 3.1: Finding Midpoints and Endpoints of Line Segments

For problems 1–3, the endpoints of a segment are given. Calculate the indicated point for each segment.

1. Determine the midpoint of the segment with endpoints (–10, –11) and (8, –17).

2. Determine the midpoint of the segment with endpoints (0, 0) and (4, 3).

3. Determine the midpoint of the segment with endpoints (3, −3) and (2, 7).

For problems 4 and 5, find the coordinates of the second endpoint given one endpoint and the midpoint of the segment.

4. endpoint (–10, 3) and midpoint (3.5, 4)
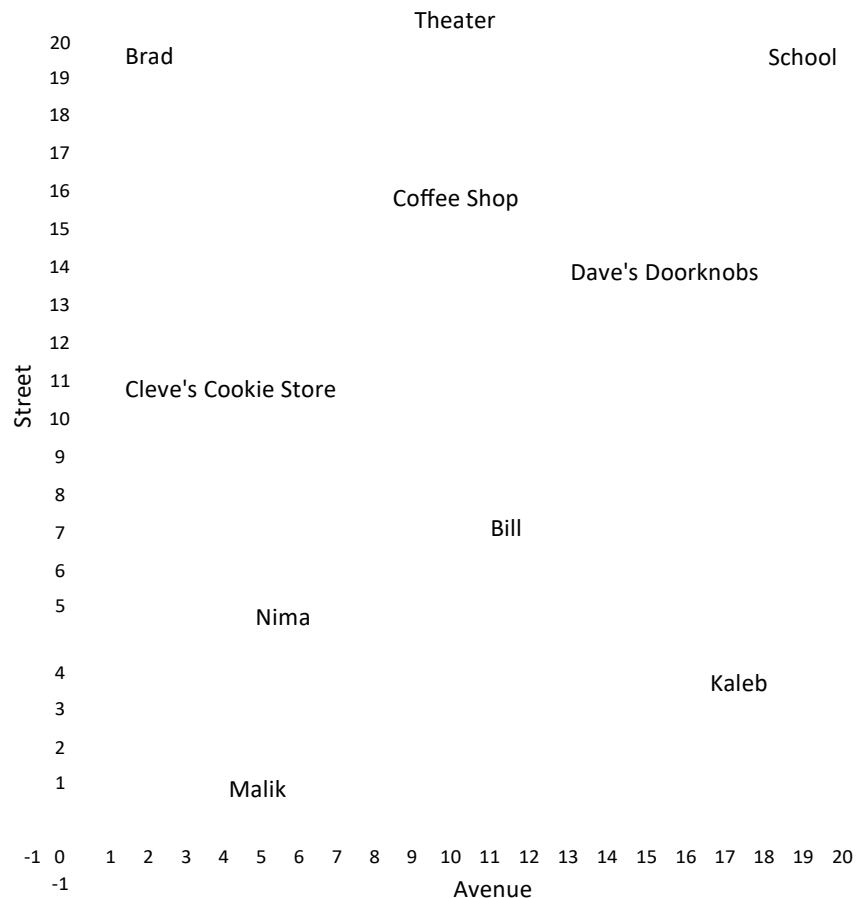
5. endpoint (22, 0) and midpoint (7, 8)

Theater

20   Brad   School

19

18

17

16   Coffee Shop

15

14   Dave's Doorknobs

13

12

Street   11   Cleve's Cookie Store

10

9

8

7   Bill

6

5   Nima

4   Kaleb

3

2

1   Malik

-1 0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   19   20

-1   Avenue

6. Luis works at a theater on 8th Avenue and 20th Street. Kaleb lives at the corner of 18th Avenue and 4th Street. What is the intersection that is midway between them?

7. Nima lives at the corner of 4th Avenue and 4th Street. Bill lives at the corner of 10th Avenue and 6th Street. Their favorite bakery is located midway between them. What is the intersection that is at the location of the bakery?

8. Cleve's Cookie Store is located at the corner of 2nd Avenue and 9th Street. Dave's Doorknobs is located at the corner of 12th Avenue and 14th Street. The post office is halfway between the two. Where is the post office?

9. Malik and Brad both live on 3rd Avenue. Malik lives at the corner of 1st Street, and Brad lives at the corner of 19th Street. A market is halfway between the two. Where is the market?

10. The main entrance to the high school is located at the corner of 17th Avenue and 19th Street.
On his way from school to the bank, Luis stops at the coffee shop located at 12th Avenue and
15th Street. The coffee shop is the midpoint of this trip. What is the location of the bank?

Name: _____ **Date:** _____

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G–

U3-23

North Carolina
Math 1
3.1