Name_____ Date_____ Period_____

LESSON 7-6 · SESSION 1 · PRACTICE · FORM A

Distance Between Points on a Grid

Learning target – I can find the distance between two points that share a coordinate. · 6.NS.C.8

REMEMBER

- Same **y-coordinate**: the points are side to side. Use the x-coordinates.
- Same **x-coordinate**: the points are up and down. Use the y-coordinates.
- **Opposite signs**: add the absolute values. **Same sign**: subtract them. (5, −2) to (5, −9) is 9 − 2 = 7.

WORKED EXAMPLE

Each unit is 1 meter. Find the distance from P(−9, 4) to Q(3, 4), and from P to R(−9, 11).

Step 1 P and Q share y = 4, so use x. −9 and 3 have opposite signs: 9 + 3 = 12 m.

Step 2 P and R share x = −9, so use y. 4 and 11 are both positive: 11 − 4 = 7 m.

Answer **PQ = 12 m and PR = 7 m**

WORDS **distance** *(distancia)* · **absolute value** *(valor absoluto)* · **coordinate plane** *(plano de coordenadas)*

PRACTICE

show your work · label units

1. Find the distance between each pair of points.

a. (3, 14) and (3, 4) _____

b. (−11, 2) and (6, 2) _____

c. (−13, 9) and (−13, −6) _____

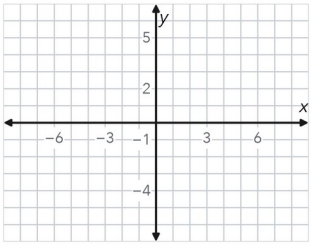
d. (−6, 4) and (5, 4) _____

2. **Town Map Walk.** Each unit is 1 kilometer. Library (−8, 5), Pool (7, 5), Clinic (−8, −6).

a. Plot and label the three places.

b. Library to Pool _____ km

c. Library to Clinic _____ km



3. **Drone Flight.** A drone flies straight from (−5, 13) to (−5, −4). Each unit is 1 meter. How far does it fly?

Hint *Same x, so use y. 13 and −4 have opposite signs.*

Show your work.

Answer_____ m

4. **One Quadrant.** Find the distance from (−16, −7) to (−16, −20).

Hint *Both y-values are negative, so subtract.*

Show your work.

Answer_____ units

5. Missing Point. Point G is at (10, −3). Point H is 15 units directly to the left of G. Name point H.

Hint *Moving left changes only x: 10 − 15.*

Show your work.

H =_____

6. Window Washer. A window washer moves from (21, 18) to (21, 7). Each unit is 1 foot. How far does the washer move?

Hint *Are 18 and 7 on the same side of 0?*

Show your work.

Answer_____ ft

7. Bus Route. A bus runs straight from (−17, −4) to (12, −4). Each unit is 1 block. How far does the bus go?

Show your work.

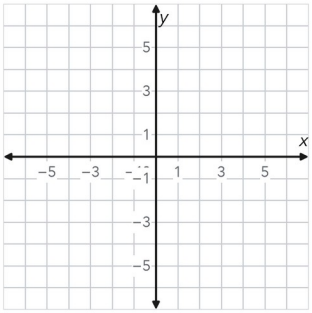
Answer_____ blocks

8. City Grid. Each unit is 1 block. A library is at (−4, 6), a school at (5, 6) and a park at (5, −3). Plot the walk on the grid.

a. Library to school _____ blocks

b. School to park _____ blocks

c. Total walk _____ blocks



FIND THE ERROR

explain the mistake, then fix it

9. Malik's Work. To find the distance from (2, −9) to (2, 6), Malik wrote 9 − 6 = 3 units. Explain his mistake. Then find the correct distance.

_____

_____

_____

TEST PRACTICE

choose the best answer

10. The distance from (4, 2) to (4, 9) is –

A 2 units **B** 7 units **C** 11 units **D** 13 units

11. The distance from (−3, 5) to (6, 5) is –

A 3 units **B** 9 units **C** 11 units **D** −9 units

SELF-CHECK CODE *find your answer · copy its letter into that problem's box · spell a math word*

(−5, −3)	17	27	25	18	13	11	5	29	(25, −3)
N	**L**	**Q**	**J**	**H**	**E**	**G**	**X**	**T**	**Z**

#3	#4	#5	#6	#7	#8c

CHECK YOURSELF	☐ I can do this on my own	☐ I need a little help	☐ I have a question about #___