Name_____ Date_____ Period_____

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

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. (2, 12) and (2, 5) _____

b. (−9, 3) and (7, 3) _____

c. (−12, 8) and (−12, −5) _____

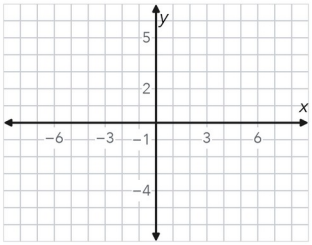
d. (−5, 1) and (9, 1) _____

2. **Town Map Walk.** Each unit is 1 kilometer. Market (−6, 4), Museum (8, 4), Station (−6, −7).

a. Plot and label the three places.

b. Market to Museum _____ km

c. Market to Station _____ km



3. **Drone Flight.** A drone flies straight from (−6, 11) to (−6, −5). Each unit is 1 meter. How far does it fly?

Hint *Same x, so use y. 11 and −5 have opposite signs.*

Show your work.

Answer_____ m

4. **One Quadrant.** Find the distance from (−15, −8) to (−15, −20).

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

Show your work.

Answer_____ units

5. Missing Point. Point G is at (9, −2). Point H is 14 units directly to the left of G. Name point H.

Hint *Moving left changes only x: 9 − 14.*

Show your work.

H =_____

6. Window Washer. A window washer moves from (19, 17) to (19, 8). Each unit is 1 foot. How far does the washer move?

Hint *Are 17 and 8 on the same side of 0?*

Show your work.

Answer_____ ft

7. Bus Route. Omar rides a bus straight from (−15, −3) to (13, −3). Each unit is 1 block. How far does he ride?

Show your work.

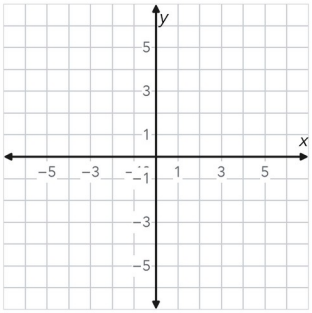
Answer_____ blocks

8. City Grid. Each unit is 1 block. Daniel walks from a library at (−5, 4) to a school at (6, 4), then to a park at (6, −2). 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. Amina's Work. To find the distance from (3, −8) to (3, 5), Amina wrote 8 − 5 = 3 units. Explain her mistake. Then find the correct distance.

TEST PRACTICE

choose the best answer

10. The distance from (6, 1) to (6, 10) is –

A 4 units **B** 9 units **C** 11 units **D** −9 units

11. Two points with the same x-coordinate lie on a –

A horizontal line **B** vertical line **C** diagonal line **D** circle

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

28	9	2	25	17	16	12	(23, −2)	(9, −16)	(−5, −2)
I	G	X	J	N	O	R	Z	Q	I

#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 #___