LESSON MAKER PRO

Mind the Gap

Find distances between rational numbers.

GRADE 7 · 7.NS.A.4.d

7.NS.A.4.d "Use a number line to demonstrate that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts."

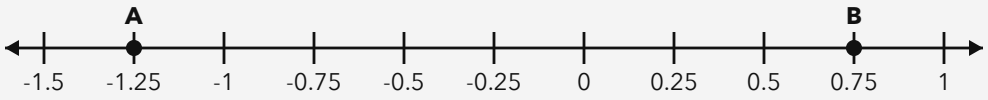
NAME _____ DATE _____

DISTANCE ON A NUMBER LINE

To find the distance between two points on a number line, subtract their values and take the absolute value of the difference. Distance is never negative.

WORKED EXAMPLE

What is the distance between A and B?

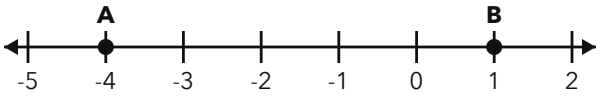


1. Read the points: A is -1.25 and B is 0.75.
2. Subtract: 0.75 - (-1.25) = 2.
3. Take the absolute value: |2| = 2.

Answer: 2 units

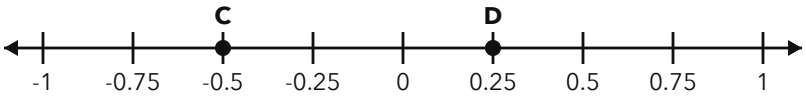
PRACTICE 6 problems

1 What is the distance between A and B on the number line?



ANSWER _____

2 What is the distance between C and D? Write your answer as a fraction.



ANSWER _____

3 Find the distance between -7 and -2.

ANSWER _____

4 Find the distance between 1/6 and 5/6.

ANSWER _____

5 Find the distance between -2/3 and 1/6.

ANSWER _____

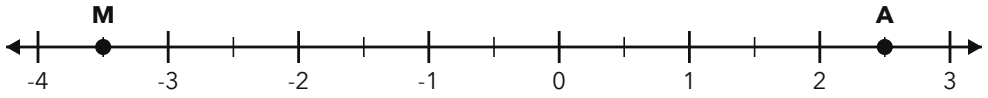
6 Which pair is farther apart, -4 and -1 or -1 and 3? How much farther apart?

ANSWER _____

_____

APPLY IT Show your work

1 The number line shows temperatures before school (M) and after school (A), in °C. How many degrees did the temperature change?



ANSWER _____

2 In a video game, your score is 5 points and a teammate's score is -8 points. What is the gap between your scores?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Two points are 2/3 unit apart. One point is at -1/2. Find both possible locations of the other point. Use absolute differences to check your answers.

WORK SPACE AND ANSWER

ANSWER KEY

Mind the Gap

GRADE 7 · 7.NS.A.4.d

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	What is the distance between A and B on the number line?	**5 units**
2	What is the distance between C and D? Write your answer as a fraction.	**3/4 unit**
3	Find the distance between -7 and -2.	**5 units**
4	Find the distance between 1/6 and 5/6.	**2/3 unit**
5	Find the distance between -2/3 and 1/6.	**5/6 unit**
6	Which pair is farther apart, -4 and -1 or -1 and 3? How much farther apart?	**-1 and 3 are farther apart by 1 unit.**

PART 2 · APPLY IT

1. **6°C** The change is |2.5 - (-3.5)| = 6°C.
2. **13 points** The score gap is |5 - (-8)| = 13 points.

CHALLENGE

The other point can be at 1/6 or -7/6. Both checks give 2/3: |1/6 - (-1/2)| = 2/3 and |-7/6 - (-1/2)| = 2/3.

Accept equivalent fractions or decimals unless a problem asks for a fraction. For the challenge, accept either order for the two locations.