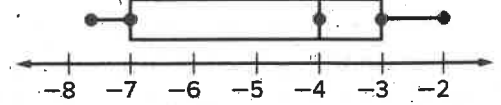


Lesson 3 Multi-Step Problem Solving

Multi-Step Example

The upper quartile of the data set represented in the box plot at the right is the product of three-fourths and the median. The lower quartile is the quotient of the median and four-sevenths. What is the interquartile range? 7.EE.4a, MP 1



Use a problem-solving model to solve this problem.

1 Understand

Read the problem. Circle the information you know. Underline what the problem is asking you to find.

2 Plan

What will you need to do to solve the problem? Write your plan in steps.

Step 1

Use equations to determine the _____ and lower quartile.

Step 2

Subtract the upper quartile from the _____.

3 Solve

Use your plan to solve the problem. Show your steps.

Use equations to determine the median and lower quartile.

$$-3 = \frac{3}{4}m \quad \text{median} = \underline{\hspace{2cm}}$$

$$m \div \frac{4}{7} = q \quad \text{lower quartile} = \underline{\hspace{2cm}}$$

Determine the interquartile range.

$$\underline{\hspace{1cm}} - \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \quad \text{Subtract.}$$

The interquartile range is _____.

4 Check

How do you know your solution is accurate?

Read to Succeed!



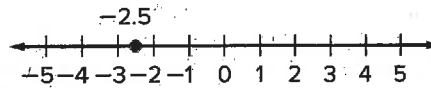
Recall that the interquartile range is the distance between the first and third quartiles.

Lesson 3 *(continued)*

Use a problem-solving model to solve each problem.

- 1 Kimberly's weight on Venus is approximately 0.38 times her weight on Jupiter. Her weight on the Earth is approximately the quotient of her weight on Venus divided by 0.9. Her weight on the Earth is 100 pounds. What is her weight in pounds on Jupiter, rounded to the nearest whole number? **7.EE.4a, MP 1**
-

- 2 A point on a number line moves to the right $\frac{1}{2}$ unit, to the left $5\frac{1}{2}$ units, and to the right 2 units, landing on the number line as shown. Where does the point start? Express your answer as a decimal. **7.EE.4a, MP 2**



- 3 Tevon designates 40% of his income for spending. If he makes \$10 per hour, how many hours per week does he have to work to have \$100 to spend weekly? **7.EE.4a, MP 1**
-

- 4 **H.O.T. Problem** The table below shows the withdrawals and deposits for a checking account. The ending balance is \$51.20. Determine the starting balance. Explain. **7.EE.4a, MP 4**

| Transaction | Amount |
|-------------|---------|
| Withdrawal | \$30 |
| Deposit | \$10.20 |
| Deposit | \$45.50 |
| Withdrawal | \$60 |

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