Homework Help for Math Out of the Box Developing Algebraic Thinking: Steps and Distance

Information about homework assignments is provided to help parents and other homework helpers with the mathematics ideas that are being developed. The homework help includes definitions of key vocabulary, questions to ask that will help students connect to the classroom investigations, problem solving examples, and other helpful explanations.

Homework 5A follows Lesson 3

- What happens to the length of the practice from the first day to the second day? Second to the third day?

- How many more practice times need to be added to each list in order to reach at least 200 minutes?

Homework 5B follows Lesson 6

- If toothpicks are available, allow your child to build the chain of triangles.

- How does the number of toothpicks change as the number of triangles increases by one?

- What would you need to do to the triangle number in order to get the number of toothpicks in the chain?

Homework 5C1 follows Lesson 8

- Ask your child to tell you about the function generator and how it works.

- What rules might you want to see used with the function generator?

Homework 5C2 follows Lesson 9

- Have your child look for changes in all parts of the block C.

- How does the step number relate to the number of squares?

Homework 5D follows Lesson 13

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- Rule for rounding:

4 or less – the whole number will stay the same.	5 or more – the whole number goes up one.
Examples:	Examples:
$2.2 \approx 2$ $3.4 \approx 3$	$6.7 \approx 7$ $2.5 \approx 3$

- A line plot displays data on a number line and uses an X to represent each piece of data.

```
                          X
            X             X
            X    X    X              X              X
    ◄───────────────────────────────────────────────────►
            0    1    2    3    4    5    6    7
```
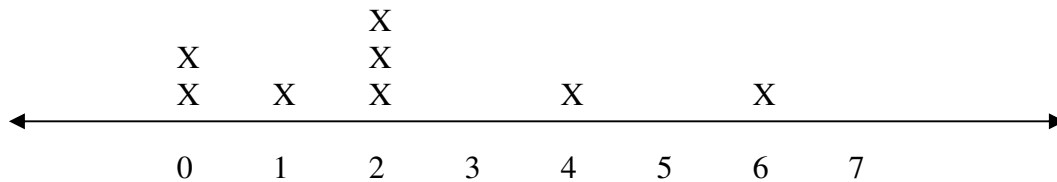
*each x represents one student

- Definitions needed:

Range – the difference between the largest number and the smallest number

Median – the middle value of an <u>ordered</u> data set
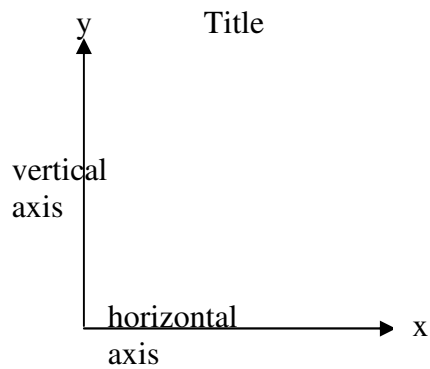
Mode – the value or category that appears most often

Mean – the average of the numbers

Homework 5E follows Lesson 16

- Use the "meter" provided to help your child measure the distance of the steps to the nearest half meter.

    Example: 0, .5, 1.0, 1.5, 2.0, 2.5, etc.

- Students will need to place the number of steps on the horizontal x-axis and the distance of the steps on the vertical y-axis.

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y   Title

vertical
axis

horizontal   → x
axis

Homework 5F1 follows Lesson 18

- Is the information easy to read on the bar graph?

- Is there another way to represent the data?

- What do you notice about the data?

- What statements can be made about the data?

Homework 5F2 follows Lesson 19

- In a stem and leaf plot the number in the ones place becomes the leaf and the other numbers become the stem. The leaves are arranged from least to greatest. The stem is set up according to the range of the numbers. For example: The ages 22, 21, 23, 23, 44, 26, 30, 43, and 54 are represented in the following stem and leaf plot.

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Ages of Adults Who Walk for Exercise

Stem	Leaf
2	1 2 3 3 6
3	0
4	3 4
5	4

Key
2 │ 2 = 22

- Outliers are values that are far from the others in a set of data.
  Example: 14, 48, 51, 59, 62, 68, 85
  * 14 and 85 represent outliers

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