



# Working with Stations/Centers

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Workshop # 125389



**Welcome! Please create your name tent  
with the following:**

Name

School Role

Hobbies/things you like to do in your “off” time

Favorite Song (One you listen to over and over!)

Your favorite manipulative for teaching math

# Norms

**Honor all start times**



**Use electronic devices to enhance your learning experiences**



**Those that do, learn, so participate actively**



**Share best practices and network**



**Incorporate what you have learned into your own best practices**






# Agenda

- Stations and Centers
  - Planning/Organizing centers
  - Managing centers
  - Making center time meaningful
- Creating our own centers





# Centers/Stations are not a dumping ground for busy work!

- Student Groupings
  - *Will your students work in pairs or groups?*
  - *If groups, what is your maximum group size?*
  - *Will you group homogeneously or heterogeneously?*
- Student Movement
  - *Will your students physically move from place to place or stay at their desks?*
  - *If students are moving, how will they know where to go next?*
  - *If students stay at their desk, what is the procedure for changing to the next activity?*





# Always plan for the unexpected!

- Classroom Space
  - *Based on your classroom size, can students spread out?*
  - *Is there a dedicated area in your room to store extra materials? (i.e. closet or cabinets)*
- Student Needs
  - *How will you know if your students have an emergency?*
  - *What should a student do if they have a question?*



# Set all expectations early in the year.

- Materials
  - *Where will your math centers be stored in your room?*
  - *What materials will you use?*
  - *How will students get their materials?*
  - *Are any materials off limits (i.e. pencil sharpener)?*
  - There are three main categories of materials for centers:
    - (1) **center activities** – games, recording sheets, etc.
    - (2) **manipulatives** – base ten blocks, geoboards, etc.
    - (3) **other items** – pencils, crayons, etc.
- Behavior Expectations
  - *How will you inform students about behavior expectations before, during and after centers?*
  - *How will you monitor noise levels?*
  - *How will you hold students accountable for their behavior?*





# CREATE A TEACHER BINDER FOR MATH CENTERS

- The Teacher Binder is going to be your one place to come back to in order to reflect, plan, and stay organized. Inside you should include:
  - Daily planning templates
  - Weekly planning templates
  - Student grouping sheets
  - Team rotation charts
  - Reflections questions
- Organize all materials for your centers.
- Organize your students as well!



# Key components for success

- Set clear expectations for your students
  - There should be a discussion with your class about what center time looks, sounds and feels like.
  - All of these things should be written on an anchor chart while they are being discussed and displayed on the wall as a clear reminder of what should be happening during center time.
- Model, Model, Model!
  - Role play with your students.
  - Have your students role play with each other and give live feedback.
  - Act out the routines/procedure yourself and think-aloud while you do them.
  - Show a video of the routine/procedure in action and discuss.
  - Take photos of your kids doing the routine and display them as reminders.
- Student jobs



# Assigning Roles to Students

- Students work more productively when they have an assigned role
- Assign roles to students, when they are assigned to a group
- You may change the roles occasionally



# Assigning Roles to Students

Here are some possible roles for the groups

Reader / Spokesperson – reads the steps of the activity aloud and speaks for the group during the debriefing sessions

Facilitator – makes sure that each student in the group has a chance to speak and pose questions; also makes sure that each student agrees on each answer

Materials Manager – handles the materials at the station and ensures that the materials are put back in place

Timekeeper – tracks the groups progress to ensure the activity is completed in the allotted time



# Making time count!

- Does your centers encourage math talk?
  - We want our kids engaging in meaningful conversations around math, right? And the best way to get students to learn academic vocabulary (i.e. sum, compare, product) is for them to actually use it.
  - Promoting math discussions between students also improves communication skills which in turn bolsters students' math confidence.
  - **Meaningful math centers allow opportunities for your kids to be able to share how they solved problems with their partner or their group members.**
- Are my activities engaging?
- Are my students exposed to a variety of question types?
  - True/False or Correct/Incorrect
  - Multiple Choice
  - Multiple Response
  - Fill-in-the-Blank
  - Matching
  - Short Answer
- Do students have opportunities to explain their thinking?
- Are there models or visuals to support the concepts being explored?



# Let's explore some stations.

- Things to keep in mind
  - Grouping
  - Student population
  - Materials/Manipulatives available
  - Differentiation to meet all learners needs
  - Timing







## Let's move into working and exploring centers

- View each station as a teacher and a 3<sup>rd</sup> grade student (if possible!)
- Document your thought on the strengths and weaknesses of the station.
- Document what SEs are being explored. How can you be sure?
- Try to document the logistics behind the stations. Movement, time at the station, materials & manipulatives used, problems explored
- Document any additional thoughts you might have.



## It's Your Turn

- In your groups look at Unit 2 for the first six weeks.
- In your groups (keeping in mind the things discussed today for stations/centers) collaborate to create a station for your assigned TEKS.
- Record your strategies and design and be ready to present to the group.
- If time allows, groups will construct their station for rotation and exploration by all groups.



## Station Design:

- Content: TEKS or a Bundle of TEKS
- Process: Strategies and/or Sample Solutions
- Math Practice: “Your Turn”
- Assessment: STAAR Connection
- Tools & Materials: Handout, Manipulatives or other Resources

# Activity Stations - AM



- **St. 1: Multiplication – 3.4D**

- Combining & Arranging Groups
  - Color Counters
  - Fraction Circles
  - Color Pencils

- **St. 2: Multiplication Facts – 3.4E**

- Number Lines
- Area Models
- Skip Counting
- BTMA

- **St. 3: One & Two 2 Step Probs. – 3.4K**

- Upside down T & Side ways T
- Sketching a Diagram

- **St. 4: Strategies & the Operations – 3.4G**

- Area Models
- Partial Products
- Distributive Property
- Centimeter paper
- Color Pencils

- **St. 5: Representing Mult. & Division – 3.5B**

- Upside Down T
- Strip Diagram
- Sentence Strips
- iPad App: Thinking Blocks

# Activity Stations - PM



- **St. 6: Represent Mult. & Div. Part II – 3.5B**
  - Upside Down T
  - Sideways T
  - Color Counters, Tiles
- **St. 7: Division by Sharing – 3.4H**
  - Color Counter
  - Color Tiles
  - Plates & Cups
- **St. 8: Measurement Division – 3.4H**
  - Color Counter
  - Color Tiles
  - Plates & Cups
- **St. 9: 2 & 3 Dim. Figures – 3.6A**
  - Polygon Figure Cards
  - Pattern Blocks
  - Mnemonic Device: QTPRRS
  - Anchor Chart
- **St. 10: Perimeter of Polygons – 3.7B**
  - Rulers
  - Tape Measure
  - Tangrams
  - Geoboards



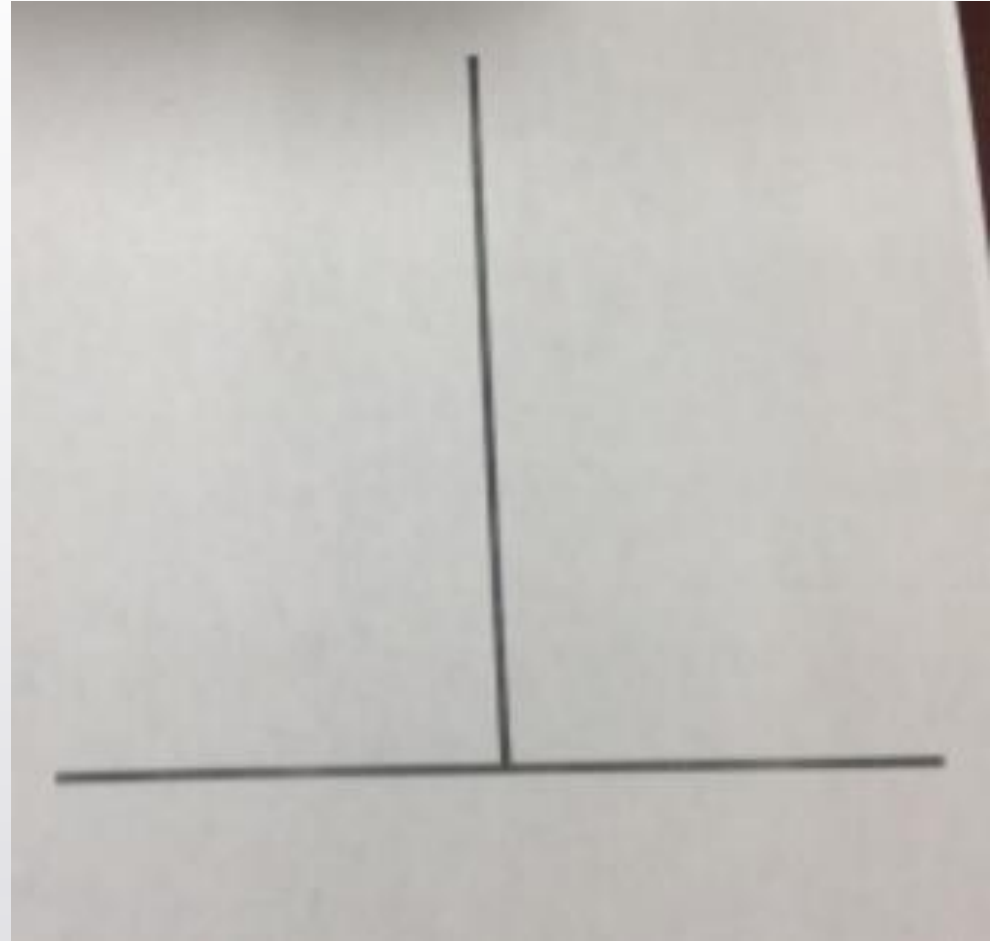
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# ***Debrief & Share Out***

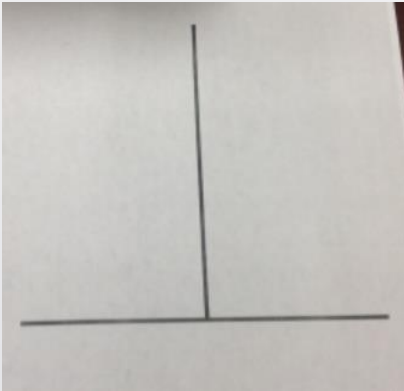




# Multi Step P. Solving Tool



# Multi Step P. Solving Toc



Marcia bought a birthday card for \$2.86 and a pen for \$1.56. She paid with a \$20 dollar bill. Her mom asked her to split the change with her brother. How much money did Marcia give her brother?

- A \$4.42
- B \$7.79
- C \$15.58
- D \$24.42

# Prompt Cards

Prompt Card



Marsha

Prompt Card



\$2.86

Prompt Card



\$1.56

Prompt Card



\$20.00

# Multi Step Problems

Marcia bought a birthday card for \$2.86 and a pen for \$1.56. She paid with a \$20 dollar bill. Her mom asked her to split the change with her brother. How much money did Marcia give her brother?

- A \$4.42
- B \$7.79
- C \$15.58
- D \$24.42

Hint Card #1

$$\begin{array}{r} 1 \ 1 \\ 2.86 \\ + 1.56 \\ \hline 4.42 \end{array}$$

Prompt Card



\$1.56

Prompt Card



\$2.86

# Multi Step Problems

Marcia bought a birthday card for \$2.86 and a pen for \$1.56. She paid with a \$20 dollar bill. Her mom asked her to split the change with her brother. How much money did Marcia give her brother?

- A \$4.42
- B \$7.79
- C \$15.58
- D \$24.42



4.42

Hint Card #2

1 9 9

~~20.00~~

- 4.42

---

15.58



—

Purchase  
\$

=

# Multi Step Problems

Marcia bought a birthday card for \$2.86 and a pen for \$1.56. She paid with a \$20 dollar bill. Her mom asked her to split the change with her brother. How much money did Marcia give her brother?





- A \$4.42
- B \$7.79
- C \$15.58
- D \$24.42

Share with the brother →







<p>Prompt Card</p>  <p>Marsha</p>	<p>Prompt Card</p>  <p>\$2.86</p>
<p>Prompt Card</p>  <p>\$1.57</p>	<p>Prompt Card</p>  <p>\$20.00</p>

<p>Hint Card #1</p> $\begin{array}{r} 11 \\ 2.86 \\ + 1.57 \\ \hline 4.43 \end{array}$	<p>Hint Card #2</p> $\begin{array}{r} 199 \\ \cancel{20.00} \\ - 4.43 \\ \hline 15.57 \end{array}$



<u>Prompt Card</u>	<u>Prompt Card</u>
<u>Prompt Card</u>	<u>Prompt Card</u>

<u>Hint Card #1</u>	<u>Hint Card #2</u>
<u>Hint Card #3</u>	<u>Hint Card #4</u>

# STAAR Items in A Box

STAAR 2018

8.3C-3 (R)

thirteen X

29 A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

If  $(x, y)$  represents the location of any point on the original square, which ordered pair represents the coordinates of the corresponding point on the resulting square?

- A  $(20x, 20y)$
- B  $(0.4x, 0.4y)$
- C  $(x + 20, y + 20)$
- D  $(x + 0.4, y + 0.4)$

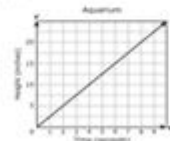
1

STAAR 2018

8.6B-2 (R)

fourteen Z

4 An aquarium is being filled with water. The graph shows the height of the water over time as the aquarium is being filled.



Which statement best describes the rate of change for this situation?

- A The height of the water decreases 20 inches per second.
- B The height of the water decreases 2 inches per second.
- C The height of the water increases 1 inch per second.
- D The height of the water increases 2.5 inches per second.

2

STAAR 2018

8.3C-3 (R)

thirteen X

29 A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

If  $(x, y)$  represents the location of any point on the original square, which ordered pair represents the coordinates of the corresponding point on the resulting square?

- A  $(20x, 20y)$
- B  $(0.4x, 0.4y)$
- C  $(x + 20, y + 20)$
- D  $(x + 0.4, y + 0.4)$

3

# STAAR Items in A Box

**STAAR 2018**  
**8.3C - 3 (R)** **thirteen X**

**29** A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

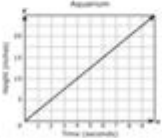
If  $(x, y)$  represents the location of any point on the original square, which ordered pair represents the coordinates of the corresponding point on the resulting square?

**A**  $(20x, 20y)$   
**B**  $(0.4x, 0.4y)$   
**C**  $(x + 20, y + 20)$   
**D**  $(x + 0.4, y + 0.4)$

**1**

**STAAR 2016**  
**8.4B - 2 (R)** **fourteen Z**

**28** An aquarium is being filled with water. The graph shows the height of the water over time as the aquarium is being filled.



Which statement best describes the rate of change for this situation?

**A** The height of the water increases 20 inches per second.  
**B** The height of the water increases 3 feet per second.  
**C** The height of the water increases 3 inches per second.  
**D** The height of the water increases 2.5 inches per second.

**2**

**STAAR 2018**  
**8.3C - 3 (R)** **thirteen X**

**29** A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

If  $(x, y)$  represents the location of any point on the original square, which ordered pair represents the coordinates of the corresponding point on the resulting square?

**A**  $(20x, 20y)$   
**B**  $(0.4x, 0.4y)$   
**C**  $(x + 20, y + 20)$   
**D**  $(x + 0.4, y + 0.4)$

**3**

# STAAR Items in A Box



8.3C - 3 (R)

thirteen X

29 A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

If  $(x, y)$  represents the location of any point on the original square, which ordered pair represents the coordinates of the corresponding point on the resulting square?

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- C  $(x + 20, y + 20)$
- D  $(x + 0.4, y + 0.4)$

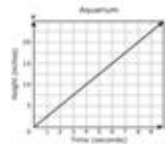
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8.6B - 2 (R)

fourteen Z

3 An aquarium is being filled with water. The graph shows the height of the water over time as the aquarium is being filled.



Which statement best describes the rate of change for this situation?

- A The height of the water increases 20 inches per second.
- B The height of the water increases 4 inch per second.
- C The height of the water increases 8 inches per second.
- D The height of the water increases 2.5 inches per second.

2



8.3C - 3 (R)

thirteen X

29 A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

If  $(x, y)$  represents the location of any point on the original square, which ordered pair represents the coordinates of the corresponding point on the resulting square?

- A  $(20x, 20y)$
- B  $(0.4x, 0.4y)$
- C  $(x + 20, y + 20)$
- D  $(x + 0.4, y + 0.4)$

3







# Quadrilateral Mnemonic: Q-T-P-R-R-S

**Q**

Quadrilateral



**T**

Trapezoid

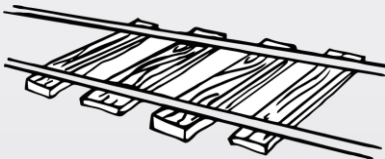


**P**

Parallelogram

**R**

Rectangle



**R**

Rhombus

**S**

Square





## 3 – 2 – 1 Reflection

Please complete the reflection on today's session

3 things that you learned

2 things that were a value to you

1 thing you try in your class