

Grade 2 – Geometry Orientation-Space

DMTI VARIED PRACTICE

DMTI Varied Practice Worksheets

This PowerPoint or PDF displays the worksheets that have varied situations (context, visual, equations, and other mathematical models) for children to work on. By completing these worksheets, children increase their foundational skills in the topic, which will help them with these standards and future mathematical topics.

1. If using a journal, have children present the worksheet and complete all the problems.
2. Or print the 'Varied Practice Worksheet Slide' for them to work on. Then, you can return to the PowerPoint or PDF to look at the keys to check their work.

Grade 2: Geometry – Orientation-Space

Materials Needed

Directions from slides

Something to mark starting place (X on the floor with tape, X with chalk if outside)

Instructions

Part 1

1. Mark starting place with an X on the ground.
2. Child will take steps forward, backward, left and right, according to the directions given.
3. Make sure there is room to take steps in all directions (forward, backward, left, right).
4. It is important to keep facing the same way when performing the steps.
5. Have the child try to take the same size step each time.
6. Child should always end at the starting place.

Getting started...

- Take one step forward (demonstrate if needed).
- Facing the same direction, take one step backward (demonstrate if needed).
- Facing the same direction, take one step to the right (demonstrate direction of right).
- Facing the same direction, take one step to the left (demonstrate direction of left).

When demonstrating, make sure to be facing the same way as the child. Remember, your body will continue to face the same way throughout the directions.

Review these steps a couple of times.

Varied Practice Worksheet 1.1: Geometry-Orientation-Space

1.

- Mark starting place with an X.
- Take 6 steps backward.
- Take 6 steps to the right.
- Take 6 steps forward.
- Take 6 steps to the left.
- Did you end up at the starting place?
- Do you know what shape you made?

2.

- Mark starting place with an X.
- Take 6 steps to the left.
- Take 2 steps backward.
- Take 2 steps to the right.
- Take 2 steps backward.
- Take 2 steps to the left.
- Take 2 steps backward.
- Take 6 steps to the right.
- Take 2 steps forward.
- Take 2 steps to the left.
- Take 2 steps forward.
- Take 2 steps to the right.
- Take 2 steps forward.
- Did you end up at the starting place?

Varied Practice Worksheet 1.2: Geometry-Orientation-Space

3.

- Mark starting place with an X.
- Take 5 steps backward.
- Take 5 steps to the right.
- Take 1 step forward.
- Take 3 steps to the left.
- Take 1 step forward.
- Take 2 steps to the right.
- Take 1 step forward.
- Take 2 steps to the left.
- Take 1 step forward.
- Take 3 steps to the right.
- Take 1 step forward.
- Take 5 steps to the left.
- Did you end at the starting place?

4.

- Mark starting place with an X.
- Take 2 steps backward.
- Take 4 steps to the right.
- Take 5 steps forward.
- Take 2 steps to the right.
- Take 1 step forward.
- Take 5 steps to the left.
- Take 1 step backward.
- Take 2 steps to the right.
- Take 4 steps backward.
- Take 2 steps to the left.
- Take 1 step forward.
- Take 1 step to the left.
- Did you end at the starting place?

Varied Practice Worksheet 1.3: Geometry-Orientation-Space

- 5.
- Mark starting place with an X.
 - Take 2 steps to the right.
 - Take 1 step backward.
 - Take 2 steps to the right.
 - Take 1 step backward.
 - Take 2 steps to the right.
 - Take 1 step backward.
 - Take 2 steps to the right.
 - Take 2 steps backward.
 - Take 8 steps to the left.
 - Take 5 steps forward.
 - Did you end at the starting place?

- 6.
- Mark starting place with an X.
 - Take 2 steps to the left.
 - Take 2 steps forward.
 - Take 2 steps to the left.
 - Take 2 steps backward.
 - Take 2 steps to the left.
 - Take 6 steps forward.
 - Take 1 step to the right.
 - Take 2 steps backward.
 - Take 1 step to the right.
 - Take 2 steps forward.
 - Take 2 steps to the right.
 - Take 2 steps backward.
 - Take 1 step to the right.
 - Take 2 steps forward.
 - Take 1 steps to the right.
 - Take 6 steps backward.
 - Did you end at the starting place?

Varied Practice Worksheet 1.4: Geometry-Orientation-Space

7.

- Mark starting place with an X.
- Take 7 steps to the right.
- Take 3 steps forward.
- Take 2 steps to the left.
- Take 2 steps to the forward.
- Take 1 step to the left.
- Take 1 step forward.
- Take 1 step to the left.
- Take 1 step backward.
- Take 1 step to the left.
- Take 2 steps backward.
- Take 2 steps to the left.
- Take 3 steps backward.
- Did you end at the starting place?

8.

- Mark starting place with an X.
- Take 7 steps to the left.
- Take 6 steps backward.
- Take 1 step to the right.
- Take 1 step forward.
- Take 1 step to the right.
- Take 1 step forward.
- Take 1 step to the right.
- Take 1 step forward.
- Take 1 step to the right.
- Take 1 step backward.
- Take 1 step to the right.
- Take 1 step backward.
- Take 1 step to the right.
- Take 1 step backward.
- Take 1 step to the right.
- Take 6 steps forward.
- Did you end at the starting place?

Grade 2: Geometry – Orientation-Space

Materials Needed

Directions from slides (use the directions from Worksheets 1.1-1.4)

Print out Worksheet 2 for grid paper (minimum of 8 sheets) or use blank paper

Instructions

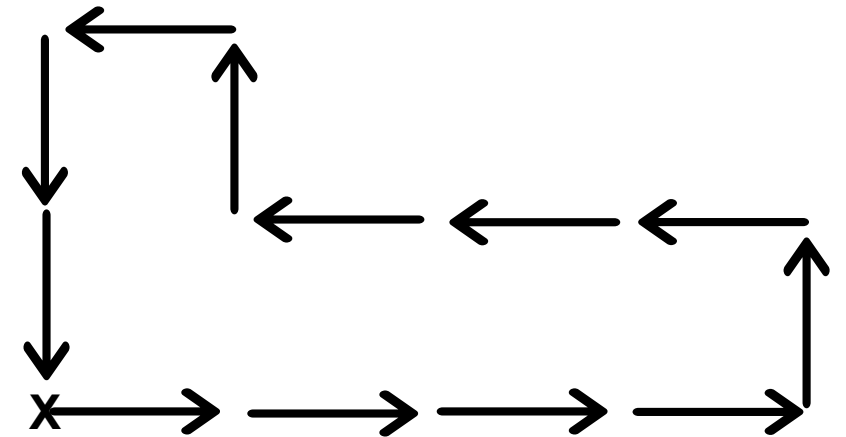
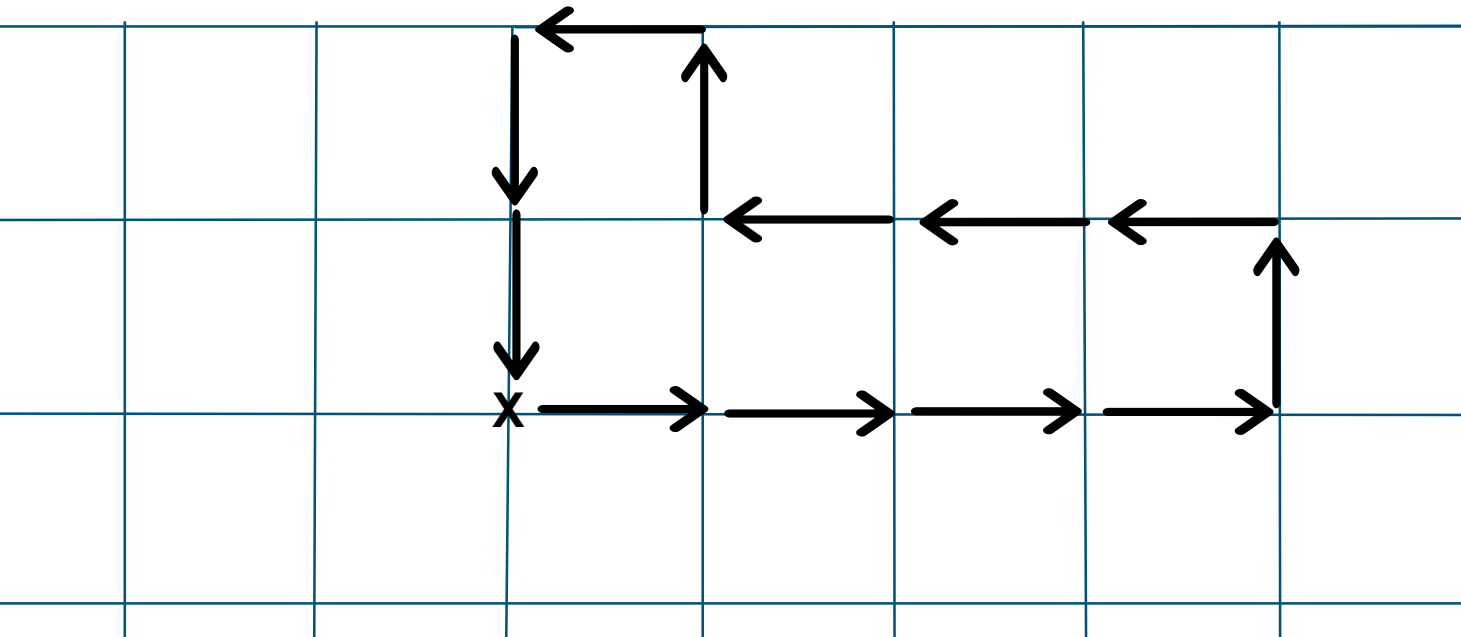
Part 2

1. Mark a starting place with an X on the grid worksheet or on blank paper. If using the grid paper, place the X on an intersecting point. (Sometimes children will have to start over because there is not enough room as they are drawing out the directions. This is great problem solving.)
2. Child reads a direction and records each step with an arrow (one side of a square on the grid paper represents one step).
3. If using blank paper, try to make each arrow (step) the same size.
4. When finished drawing the shape, discuss what the child notices about the shape. Are any sides the same? Do any make shapes, figures, or objects you have seen before? Do you see any patterns between the directions and the shapes?

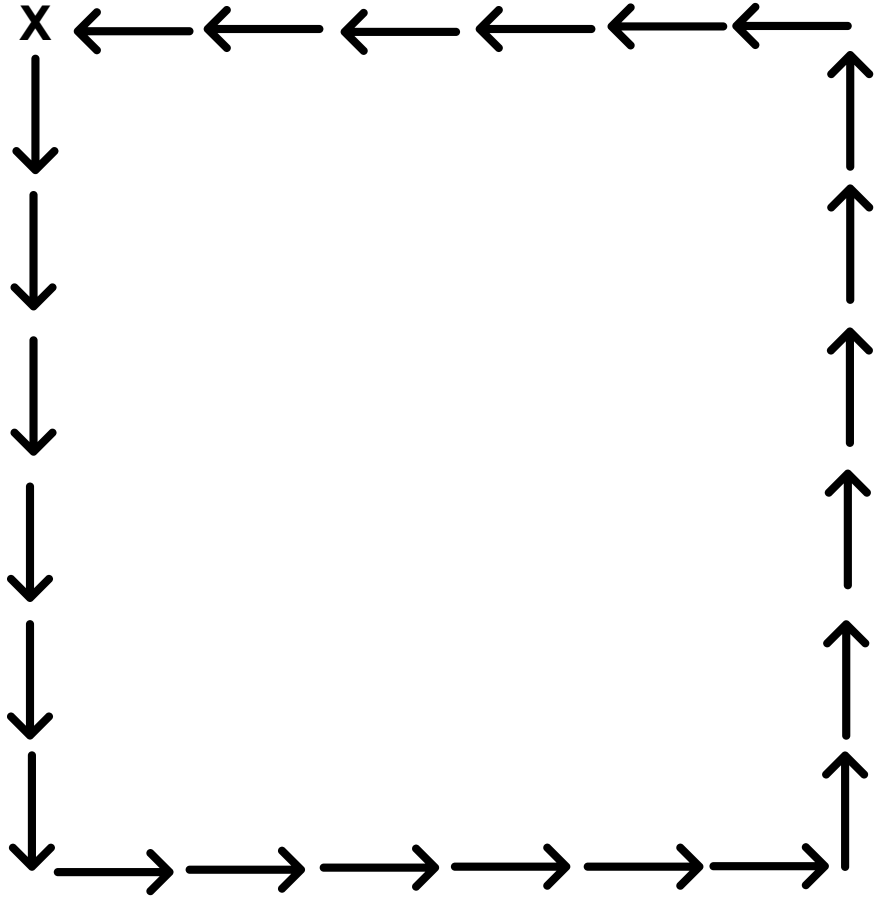
Varied Practice Worksheet 2: Geometry-Orientation-Space

Example

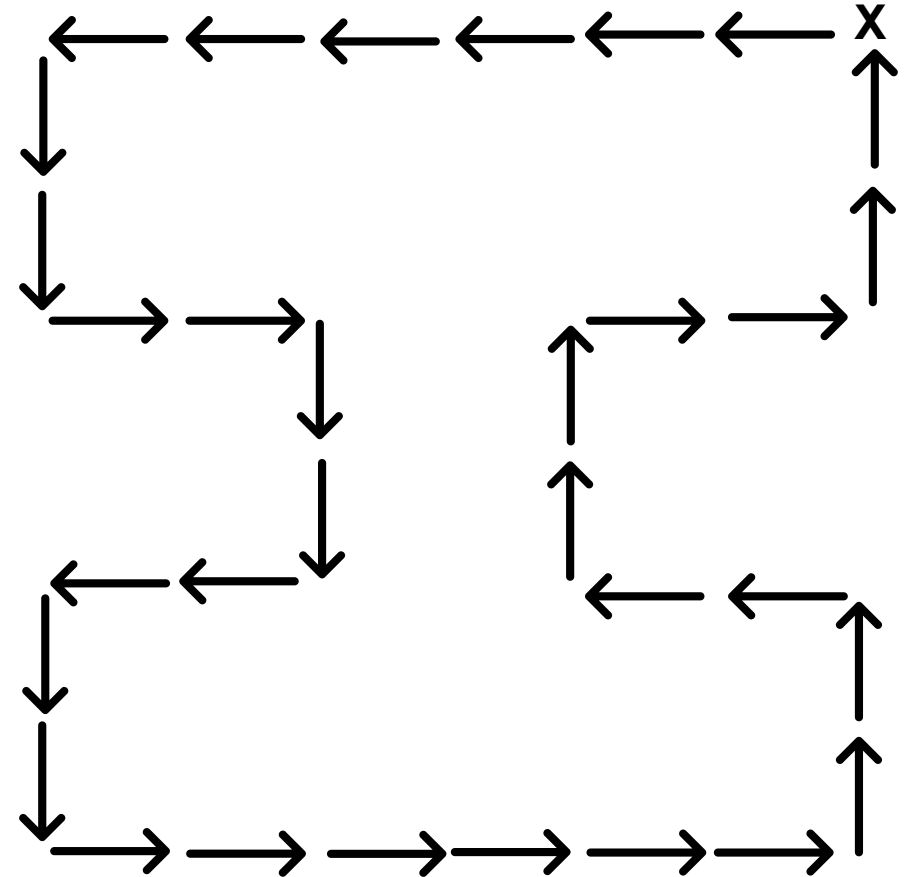
- Mark starting place with an X.
- Take 4 steps to the right.
- Take one step forward.
- Take 3 steps to the left.
- Take 1 step forward.
- Take 1 step to the left.
- Take 2 steps backward.
- Did you end up at the starting place?



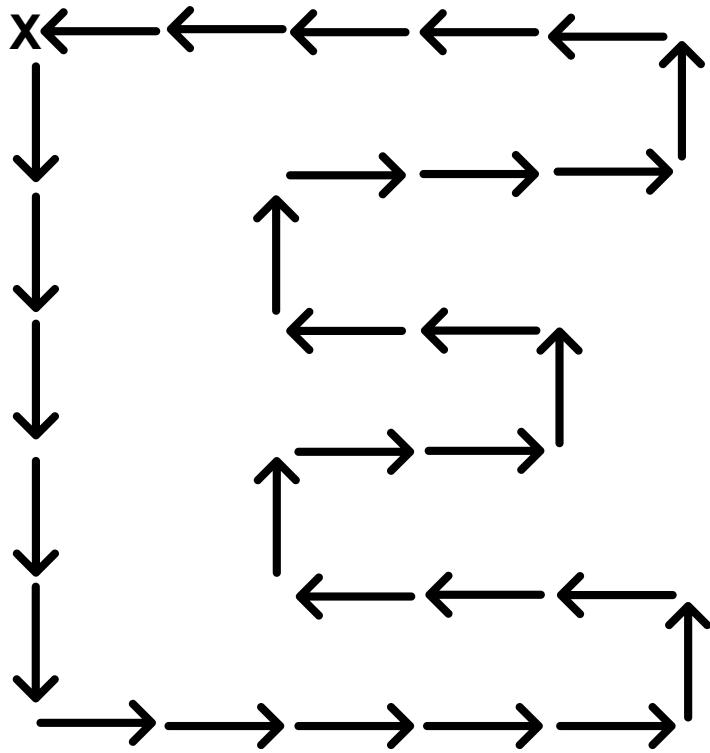
1.



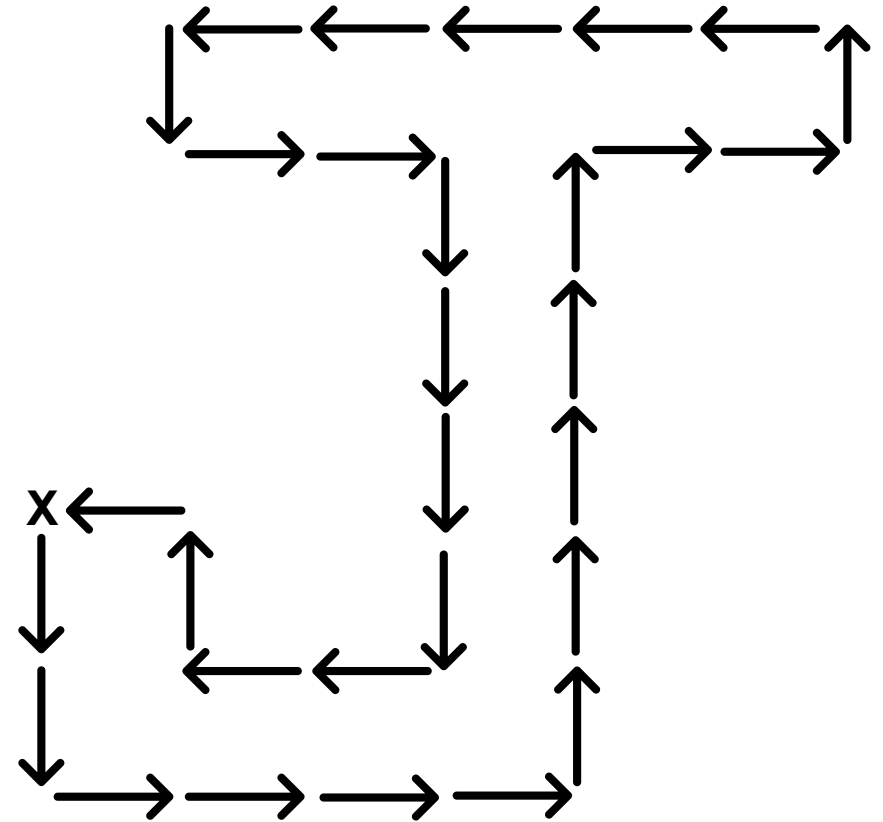
2.



3.



4.



Grade 2: Geometry – Orientation-Space

Materials Needed

Orientation maps from Part 2

Paper to write out directions

Instructions

Part 3

1. Look at the orientation map.
2. Starting at the X, write the directions that match the map from a different starting place from Part 1 of this activity.

***Have fun creating new orientation maps, writing the directions and having others follow them!