Unit 2 - Transformations and Triangle Congruence:

Day 1:

Learning Targets and Success Criteria:

1. I can represent transformations visually.
       I know I can because:
    o I can identify the difference between a reflection, translation, rotation, and dilation.
    o I can use patty paper to physically reflect, translate, and rotate a pre-image to an image and determine the coordinates of both the pre-image and the image.
2. I can describe transformations as functions with inputs and outputs.
       I know I can because:
    o I can use coordinates of the pre-image (input) and the image (output) to describe the transformation as a function.
    o I can specify a sequence of transformations that will carry a given figure onto itself.
 3. I can compare transformations that preserve congruence with those that do not.
       I know I can because:
    o I can recognize a translation, reflection, and rotation maintain the shape of a figure and preserves congruence.
    o I can recognize that a dilation changes the size of a figure and does not preserve congruence.
4. I can show that triangles are congruent if and only if their corresponding sides and angles are congruent.
        I know I can because:
    o Given two figures I can identify their corresponding sides and angles.
    o I can write congruency statements for corresponding sides, angles and triangles. (CPCTC)
    o I can recognize that if corresponding parts of triangles are congruent, then the triangles are congruent.
5. I can prove triangles are congruent.
        I know I can because:
    o I can prove triangles congruent by ASA, SAS, SSS, AAS triangle congruence theorems.

Standard: MGSE9-12.G.CO.2-8

Introduction/Connection:

Daily 10

Direct Instruction/Guided Practice/Assessment Strategy/Assignment:

Rotation, Translation, Reflection PowerPoint (Direct Instruction)

Transformations - Rigid Motions - Notes (Guided Practice)

Transformations - Rigid Motions - Practice (Independent)

Recognizing Congruent Shapes Color Activity

Summarizers: Discuss and correct questions they thought were difficult.

Homework: None :)

Day 2:

Learning Targets and Success Criteria:

1. I can represent transformations visually.
    I know I can because:
    o I can identify the difference between a reflection, translation, rotation, and dilation.
    o I can use patty paper to physically reflect, translate, and rotate a pre-image to an image and determine the coordinates of both the pre-image and the image.
2. I can describe transformations as functions with inputs and outputs.
    I know I can because:
    o I can use coordinates of the pre-image (input) and the image (output) to describe the transformation as a function.
    o I can specify a sequence of transformations that will carry a given figure onto itself.
3. I can compare transformations that preserve congruence with those that do not.
    I know I can because:
    o I can recognize a translation, reflection, and rotation maintain the shape of a figure and preserves congruence.
    o I can recognize that a dilation changes the size of a figure and does not preserve congruence.
4. I can show that triangles are congruent if and only if their corresponding sides and angles are congruent.
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    o Given two figures I can identify their corresponding sides and angles.
    o I can write congruency statements for corresponding sides, angles and triangles. (CPCTC)
    o I can recognize that if corresponding parts of triangles are congruent, then the triangles are congruent.
5. I can prove triangles are congruent.
    I know I can because:
    o I can prove triangles congruent by ASA, SAS, SSS, AAS triangle congruence theorems.

Standard: MGSE9-12.G.CO.2-8

Introduction/Connection:

Daily 10

Direct Instruction/Guided Practice/Assessment Strategy/Assignment:

Transformations Booklet (Direct Instruction)

Transformations Booklet examples (Guided Practice)

Transformations Graphic Organizer (Guided)

Summarizers: Discuss and correct questions they thought were difficult.

Homework: None :)

Day 3:

Learning Targets and Success Criteria:

1. I can represent transformations visually.
    I know I can because:
    o I can identify the difference between a reflection, translation, rotation, and dilation.
    o I can use patty paper to physically reflect, translate, and rotate a pre-image to an image and determine the coordinates of both the pre-image and the image.
2. I can describe transformations as functions with inputs and outputs.

I know I can because:

- o I can use coordinates of the pre-image (input) and the image (output) to describe the transformation as a function.
- o I can specify a sequence of transformations that will carry a given figure onto itself.

3. I can compare transformations that preserve congruence with those that do not.

I know I can because:

- o I can recognize a translation, reflection, and rotation maintain the shape of a figure and preserves congruence.
- o I can recognize that a dilation changes the size of a figure and does not preserve congruence.

4. I can show that triangles are congruent if and only if their corresponding sides and angles are congruent.

I know I can because:

- o Given two figures I can identify their corresponding sides and angles.
- o I can write congruency statements for corresponding sides, angles and triangles. (CPCTC)
- o I can recognize that if corresponding parts of triangles are congruent, then the triangles are congruent.

5. I can prove triangles are congruent.

I know I can because:

- o I can prove triangles congruent by ASA, SAS, SSS, AAS triangle congruence theorems.

Standard: **MGSE9-12.G.CO.2-8**

Introduction/Connection:

Daily 10

Direct Instruction/Guided Practice/Assessment Strategy/Assignment:

More Transformations Notes (Direct Instruction & Guided Practice)

More Transformations Practice (Independent)

Transformations Color Project (sun)

Summarizers: Discuss and correct questions they thought were difficult.

Homework: None :)

Day 4:

Learning Targets and Success Criteria:

1. I can represent transformations visually.

I know I can because:

- o I can identify the difference between a reflection, translation, rotation, and dilation.
- o I can use patty paper to physically reflect, translate, and rotate a pre-image to an image and determine the coordinates of both the pre-image and the image.

2. I can describe transformations as functions with inputs and outputs.

I know I can because:

- o I can use coordinates of the pre-image (input) and the image (output) to describe the transformation as a function.
- o I can specify a sequence of transformations that will carry a given figure onto itself.

3. I can compare transformations that preserve congruence with those that do not.

I know I can because:

- o I can recognize a translation, reflection, and rotation maintain the shape of a figure and preserves congruence.
- o I can recognize that a dilation changes the size of a figure and does not preserve congruence.

4. I can show that triangles are congruent if and only if their corresponding sides and angles are congruent.

I know I can because:

o   Given two figures I can identify their corresponding sides and angles.
o   I can write congruency statements for corresponding sides, angles and triangles. (CPCTC)
o   I can recognize that if corresponding parts of triangles are congruent, then the triangles are congruent.
5. I can prove triangles are congruent.
              I know I can because:
o   I can prove triangles congruent by ASA, SAS, SSS, AAS triangle congruence theorems.

Standard: MGSE9-12.G.CO.2-8

Introduction/Connection:

Daily 10

Direct Instruction/Guided Practice/Assessment Strategy/Assignment:

CPCTC Notes (Direct Instruction & Guided Practice)

4.3 CPCTC Notes (Guided Practice)

CPCTC Practice 1 (Independent)

CPCTC Practice 2 (Independent)

Summarizers: Discuss and correct questions they thought were difficult.

Homework: None :)

Day 5:

Learning Targets and Success Criteria:

1. I can represent transformations visually.
                I know I can because:
o   I can identify the difference between a reflection, translation, rotation, and dilation.
o   I can use patty paper to physically reflect, translate, and rotate a pre-image to an image and determine the coordinates of both the pre-image and the image.
2. I can describe transformations as functions with inputs and outputs.
              I know I can because:
o   I can use coordinates of the pre-image (input) and the image (output) to describe the transformation as a function.
o   I can specify a sequence of transformations that will carry a given figure onto itself.
 3. I can compare transformations that preserve congruence with those that do not.
              I know I can because:
o   I can recognize a translation, reflection, and rotation maintain the shape of a figure and preserves congruence.
o   I can recognize that a dilation changes the size of a figure and does not preserve congruence.
4. I can show that triangles are congruent if and only if their corresponding sides and angles are congruent.
             I know I can because:
o   Given two figures I can identify their corresponding sides and angles.
o   I can write congruency statements for corresponding sides, angles and triangles. (CPCTC)
o   I can recognize that if corresponding parts of triangles are congruent, then the triangles are congruent.
5. I can prove triangles are congruent.
             I know I can because:
o   I can prove triangles congruent by ASA, SAS, SSS, AAS triangle congruence theorems.

Standard: **MGSE9-12.G.CO.2-8**

Introduction/Connection:

Daily 10

Direct Instruction/Guided Practice/Assessment Strategy/Assignment:

Graphic Organizer for showing 2 triangles are congruent (Direct Instruction)

Congruent Triangle Theorems Notes (Guided Practice)

Congruent Triangles Practice (Independent)

4.2 A Triangle Congruence

Summarizers: Discuss and correct questions they thought were difficult.

Homework: None :)

Day 6:

Learning Targets and Success Criteria:

1. I can represent transformations visually.
    > I know I can because:
    - o I can identify the difference between a reflection, translation, rotation, and dilation.
    - o I can use patty paper to physically reflect, translate, and rotate a pre-image to an image and determine the coordinates of both the pre-image and the image.
2. I can describe transformations as functions with inputs and outputs.
    > I know I can because:
    - o I can use coordinates of the pre-image (input) and the image (output) to describe the transformation as a function.
    - o I can specify a sequence of transformations that will carry a given figure onto itself.
3. I can compare transformations that preserve congruence with those that do not.
    > I know I can because:
    - o I can recognize a translation, reflection, and rotation maintain the shape of a figure and preserves congruence.
    - o I can recognize that a dilation changes the size of a figure and does not preserve congruence.
4. I can show that triangles are congruent if and only if their corresponding sides and angles are congruent.
    > I know I can because:
    - o Given two figures I can identify their corresponding sides and angles.
    - o I can write congruency statements for corresponding sides, angles and triangles. (CPCTC)
    - o I can recognize that if corresponding parts of triangles are congruent, then the triangles are congruent.
5. I can prove triangles are congruent.
    > I know I can because:
    - o I can prove triangles congruent by ASA, SAS, SSS, AAS triangle congruence theorems.

Standard: **MGSE9-12.G.CO.2-8**

Introduction/Connection:

Daily 10

Direct Instruction/Guided Practice/Assessment Strategy/Assignment:

Triangle congruence Practice

4.3 A Congruent Triangles (Guided Practice)

More Transformations and Triangle Congruence Practice (Independent)

Summarizers: Discuss and correct questions they thought were difficult.

Homework: None :)

Day 7:

Learning Targets and Success Criteria:

1. I can represent transformations visually.
>   I know I can because:
    - o I can identify the difference between a reflection, translation, rotation, and dilation.
    - o I can use patty paper to physically reflect, translate, and rotate a pre-image to an image and determine the coordinates of both the pre-image and the image.
2. I can describe transformations as functions with inputs and outputs.
>   I know I can because:
    - o I can use coordinates of the pre-image (input) and the image (output) to describe the transformation as a function.
    - o I can specify a sequence of transformations that will carry a given figure onto itself.
3. I can compare transformations that preserve congruence with those that do not.
>   I know I can because:
    - o I can recognize a translation, reflection, and rotation maintain the shape of a figure and preserves congruence.
    - o I can recognize that a dilation changes the size of a figure and does not preserve congruence.
4. I can show that triangles are congruent if and only if their corresponding sides and angles are congruent.
>   I know I can because:
    - o Given two figures I can identify their corresponding sides and angles.
    - o I can write congruency statements for corresponding sides, angles and triangles. (CPCTC)
    - o I can recognize that if corresponding parts of triangles are congruent, then the triangles are congruent.
5. I can prove triangles are congruent.
>   I know I can because:
    - o I can prove triangles congruent by ASA, SAS, SSS, AAS triangle congruence theorems.

Standard: MGSE9-12.G.CO.2-8

Introduction/Connection:

Daily 10

Direct Instruction/Guided Practice/Assessment Strategy/Assignment:

5-1 Triangle Congruence (Guided Practice)

Triangle Congruence Practice (Independent)

4.4A Triangle Congruence (Independent)

Summarizers: Discuss and correct questions they thought were difficult.

Homework: None :)

Day 8:

Learning Targets and Success Criteria:

1. I can represent transformations visually.
        I know I can because:
    o I can identify the difference between a reflection, translation, rotation, and dilation.
    o I can use patty paper to physically reflect, translate, and rotate a pre-image to an image and determine the
       coordinates of both the pre-image and the image.
2. I can describe transformations as functions with inputs and outputs.
        I know I can because:
    o I can use coordinates of the pre-image (input) and the image (output) to describe the transformation as a function.
    o I can specify a sequence of transformations that will carry a given figure onto itself.
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    o I can write congruency statements for corresponding sides, angles and triangles. (CPCTC)
    o I can recognize that if corresponding parts of triangles are congruent, then the triangles are congruent.
5. I can prove triangles are congruent.
        I know I can because:
    o I can prove triangles congruent by ASA, SAS, SSS, AAS triangle congruence theorems.

Standard: MGSE9-12.G.CO.2-8

Introduction/Connection:

Daily 10

Direct Instruction/Guided Practice/Assessment Strategy/Assignment:

Transformations And Triangle Congruence Practice Quiz (Independent and then correct and discuss solutions)

Transformations and Triangle Congruence Quiz (Independent)

Summarizers: Discuss and correct questions they thought were difficult.

Homework: None :)

Day 9:

Learning Targets and Success Criteria:

1. I can represent transformations visually.
    I know I can because:
    o   I can identify the difference between a reflection, translation, rotation, and dilation.
    o   I can use patty paper to physically reflect, translate, and rotate a pre-image to an image and determine the coordinates of both the pre-image and the image.
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    o   I can specify a sequence of transformations that will carry a given figure onto itself.
3. I can compare transformations that preserve congruence with those that do not.
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    o   I can recognize a translation, reflection, and rotation maintain the shape of a figure and preserves congruence.
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    o   Given two figures I can identify their corresponding sides and angles.
    o   I can write congruency statements for corresponding sides, angles and triangles. (CPCTC)
    o   I can recognize that if corresponding parts of triangles are congruent, then the triangles are congruent.
5. I can prove triangles are congruent.
    I know I can because:
    o   I can prove triangles congruent by ASA, SAS, SSS, AAS triangle congruence theorems.

Standard: **MGSE9-12.G.CO.2-8**

Introduction/Connection:

Daily 10

Direct Instruction/Guided Practice/Assessment Strategy/Assignment:

Unit 2 Test Review (Independent and correct and discuss solutions)

Unit 2 Multiple Chice Practice Test

iXLs: J1, J2, K1, K5

Jack O'Lantern Task

Summarizers: Discuss and correct questions they thought were difficult.

Homework: None :)

Day 10:

Learning Targets and Success Criteria:

1. I can represent transformations visually.
    I know I can because:
    o   I can identify the difference between a reflection, translation, rotation, and dilation.
    o   I can use patty paper to physically reflect, translate, and rotate a pre-image to an image and determine the coordinates of both the pre-image and the image.
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- o I can write congruency statements for corresponding sides, angles and triangles. (CPCTC)
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    I know I can because:
- o I can prove triangles congruent by ASA, SAS, SSS, AAS triangle congruence theorems.

Standard: MGSE9-12.G.CO.2-8

Introduction/Connection:

Daily 10

Direct Instruction/Guided Practice/Assessment Strategy/Assignment:

Unit 2 Test (Independent)

Summarizers: Discuss and correct questions they thought were difficult.

Homework: None :)