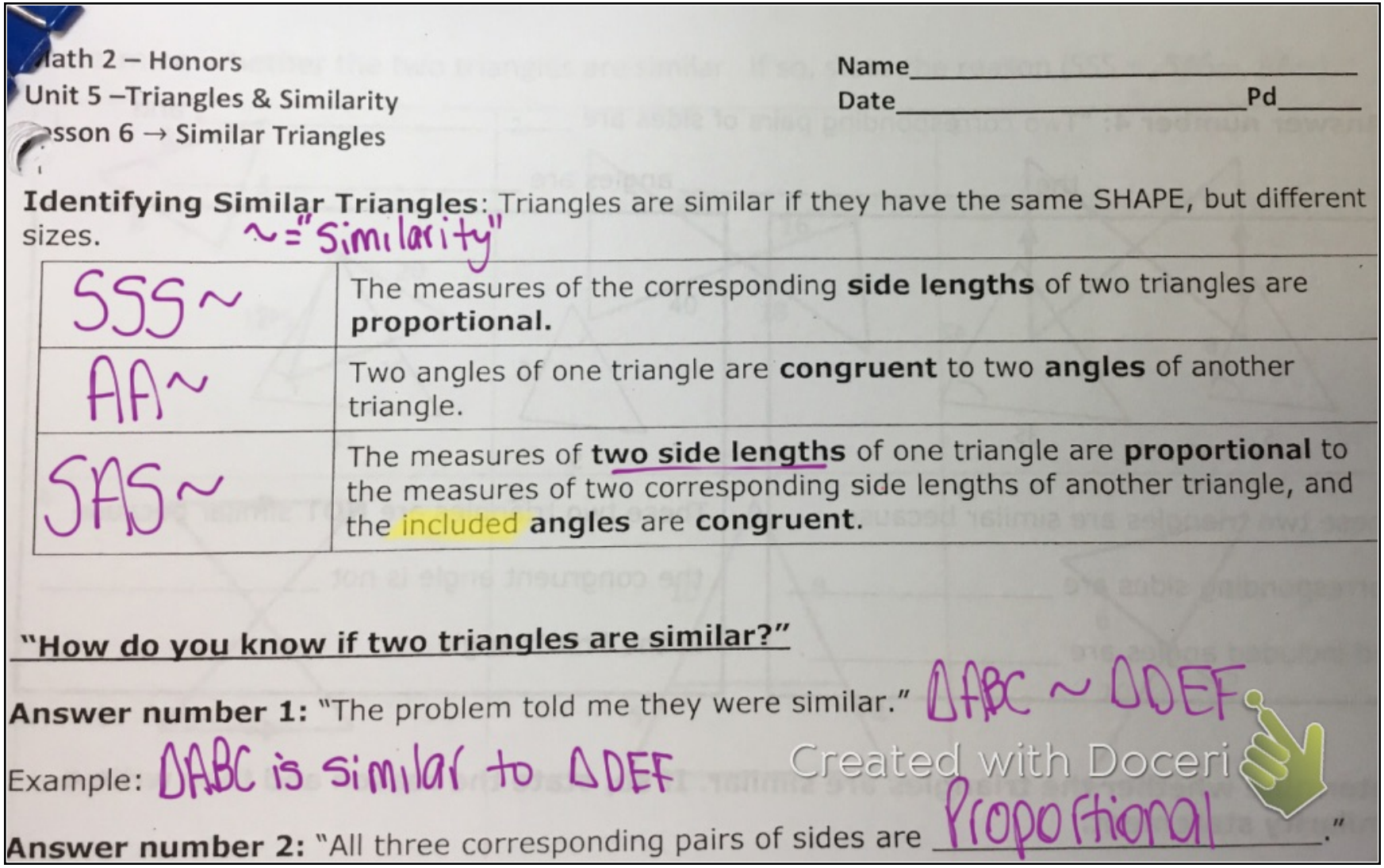
Unit 5

Lesson 6

△ Similarity



lath 2 – Honors
Unit 5 –Triangles & Similarity
sson 6 → Similar Triangles

Name_____
Date_____ Pd_____

Identifying Similar Triangles: Triangles are similar if they have the same SHAPE, but different sizes. ~="Similarity"

SSS~	The measures of the corresponding **side lengths** of two triangles are **proportional.**
AA~	Two angles of one triangle are **congruent** to two **angles** of another triangle.
SAS~	The measures of **two side lengths** of one triangle are **proportional** to the measures of two corresponding side lengths of another triangle, and the included **angles** are **congruent**.

"How do you know if two triangles are similar?"

Answer number 1: "The problem told me they were similar." △ABC ~ △DEF

Example: △ABC is similar to △DEF

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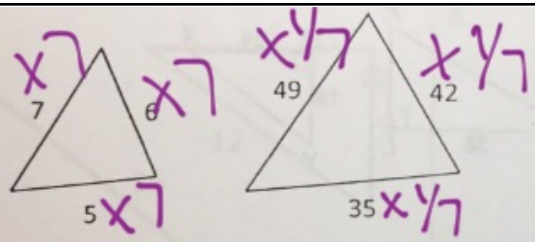
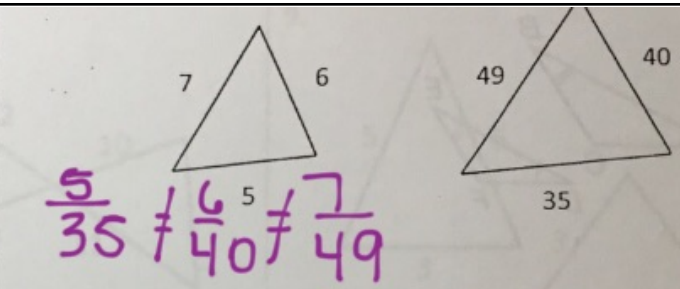
Answer number 2: "All three corresponding pairs of sides are Proportional."

1-

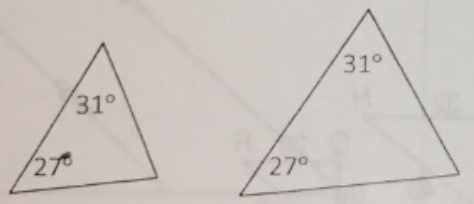


These two triangles are similar because the sides are Proportional.

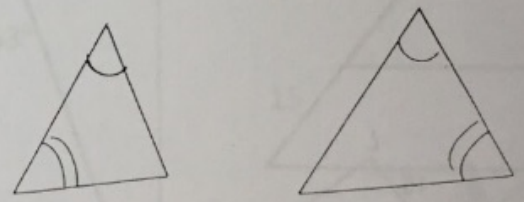


These two triangles are **NOT** similar because the sides are not ALL proportional.

Answer number 3: "Two corresponding pairs of angles are congruent."

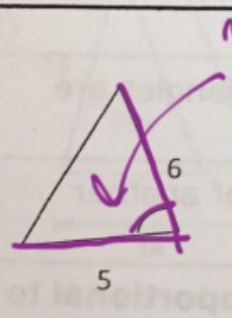


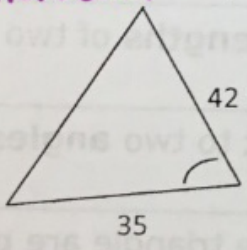
These two triangles are similar because corresponding angles are ≅.



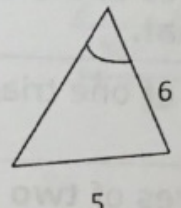
These two triangles are **NOT** similar because congruent angles are not corresponding

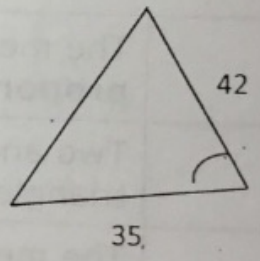
Answer number 4: "Two corresponding pairs of sides are proportional, and the corresponding angles are ≅."





These two triangles are similar because Corresponding sides are proportional and included angles are ≅.



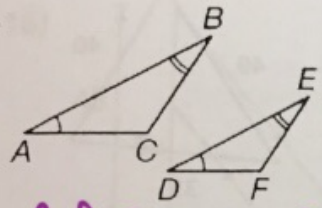


These two triangles are **NOT** similar because the congruent angle is not included in the first triangle.

Determine whether the triangles are similar. If so, state the reason and then write a

Determine whether the triangles are similar. If so, state the reason and then write a similarity statement. SSS, AA, SAS, None

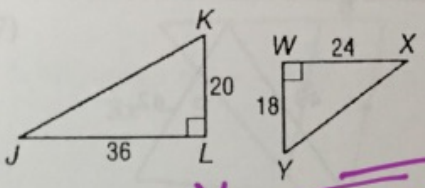
1.



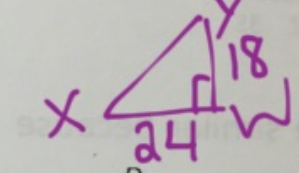
AA~

△ABC~△DEF

2.

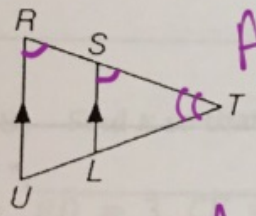


$\frac{20}{18} = \frac{36}{24}$



NO

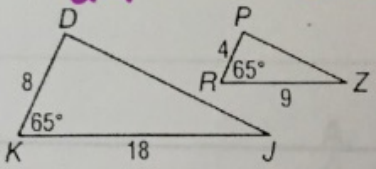
3.



AA~

△RTU~△STL

4.

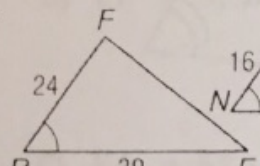


SAS~

△DKJ~△PRZ

$\frac{4}{8} = \frac{9}{18}$

5.



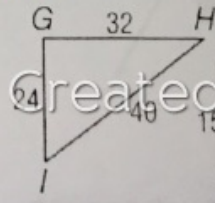
$\frac{24}{16} = \frac{39}{26}$

SAS~

△FBE~△LNM

△GHI~△QRS

6.



$\frac{20}{32} = \frac{25}{40} = \frac{15}{24}$

SSS~

Page 30: CW

Go over at 10:02

S-S M-M L-L
Determine whether the two triangles are similar. If so, state the reason (SSS ~, SAS~, AA~)
1.
SSS~
2.
NO
3.
AA~
4.
AA~
5.
SAS~
6.
SAS~
7.
SSS~
8.
SAS~
9.
NO
10.
AA~
11.
NO
12.
SAS~
30
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Page 31-33

HW