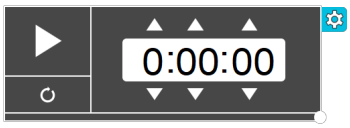
Monday 3/9/2020

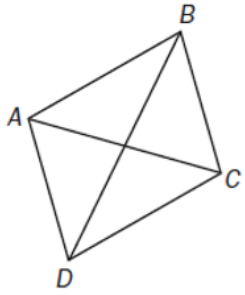


1. Grab Notes & Calculator
2. Put your phones/earbuds away
3. HW key on board
4. Complete the Warm-Up (#16-20) in EOC Review Packet
5. Similar Figures Notes
6. Skills Check at end of class

Jul 31-9:37 PM

Warm-Up:

16) What proves that figure ABCD is a parallelogram?



A. Diagonal BD bisects angle ABC.

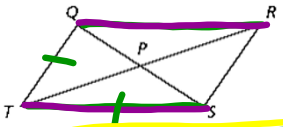
B. Side AB is equal to diagonal AC.

C. Diagonal BD bisects diagonal AC.

D. Diagonal BD is greater than diagonal AC.

Feb 27-2:32 PM

17) Which of the following would be enough information to prove that quadrilateral QRST is a parallelogram?



A. $\overline{QR} \cong \overline{ST}$

B. $QR \parallel ST$

C. $\overline{QP} \cong \overline{PS}$ and $\overline{TP} \cong \overline{PR}$

D. Two pairs of sides are congruent.

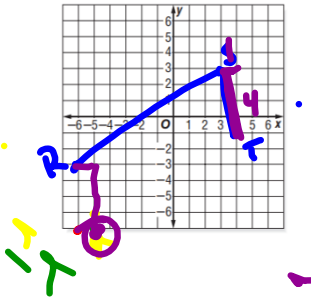
18) Quadrilateral RSTU has vertices R(-6, -3), S(3, 3), and T(4, -1). What are the coordinates of vertex U if RSTU is a parallelogram?

A. (-5, -6)

B. (-5, -7)

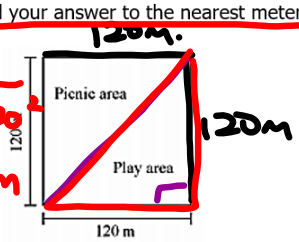
C. (-6, -7)

D. (-6, 3)



Feb 27-2:32 PM

19) A community is building a square park with sides that measure 120 meters. To separate the picnic area from the play area, the park is split by a diagonal line from opposite corners. Determine the approximate length of the diagonal line that splits the square. If necessary, round your answer to the nearest meter.



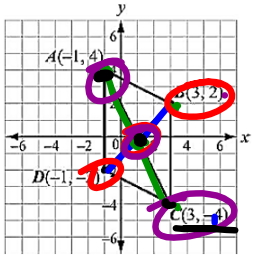
A. 28,800 meters

B. 170 meters

C. 240 meters

D. 120 meters

20) Parallelogram ABCD has vertices as shown.



Which equation would be used in proving that the diagonals of parallelogram ABCD bisect each other?

A. $\sqrt{(3-1)^2+(2-0)^2} = \sqrt{(1-3)^2+(0+4)^2}$

B. $\sqrt{(3+1)^2+(2+0)^2} = \sqrt{(1+3)^2+(0+4)^2}$

C. $\sqrt{(-1-1)^2+(4-0)^2} = \sqrt{(1-3)^2+(0+4)^2}$

D. $\sqrt{(-1+1)^2+(4+0)^2} = \sqrt{(1+3)^2+(0-4)^2}$

HW Answers

Feb 28-1:37 PM

What am I learning today?

Learning Objective 2C.3

How to explain two figures are similar

Jul 31-6:18 PM

What will I do to show that I have learned it?

I can...Prove similar figures have congruent angles and proportional sides.

Jul 31-6:18 PM

- **Similar Figures** – Polygons that have the same **SHAPE**, but different **SIZE**

Two polygons are similar if and only if:

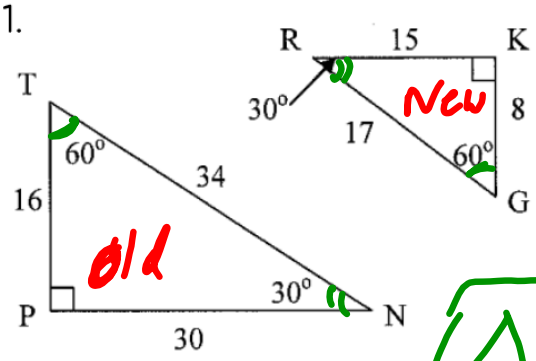
- ✓ **ALL** corresponding **angle measures** are **CONGRUENT**
- ✓ **ALL** corresponding **sides** are **PROPORTIONAL** using a **SCALE FACTOR** New/old

When two polygons are similar, we can write a **similarity** statements using the symbol " ~ ".

Sep 6-7:25 AM

Are these figures similar? If so, write a similarity statement.

1.



Check angles: ✓
$\angle T = 60° = \angle G$
$\angle P = 90° = \angle K$
$\angle N = 30° = \angle R$

Check sides: ✓
$\overline{TP} \& \overline{GK}: \frac{8}{16} = \frac{1}{2}$
$\overline{PN} \& \overline{KR}: \frac{15}{30} = \frac{1}{2}$
$\overline{TN} \& \overline{GR}: \frac{17}{34} = \frac{1}{2}$

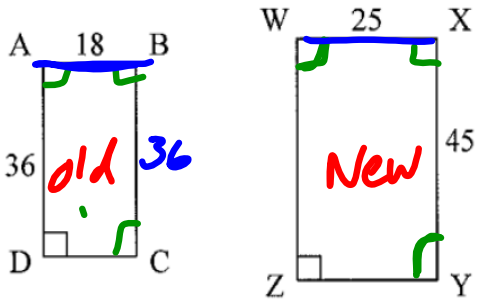
$\triangle TPN \sim \triangle GKR$

Sep 6-7:28 AM

Are these figures similar? If so, write a similarity statement.

$\square ABCD$ and $\square WXYZ$ are rectangles

2.



Check angles: ✓
All Right angles are congruent

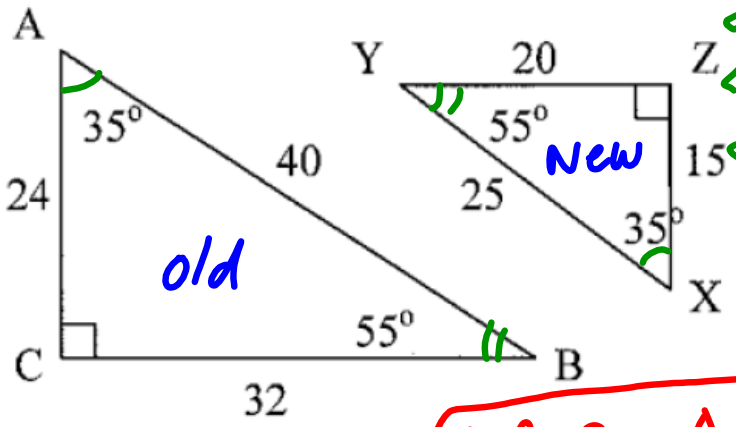
Check sides: ✗
$\overline{XD} \& \overline{BA}$
$\frac{25}{18} = 1.38$
$\overline{BC} \& \overline{XY}$
$\frac{45}{36} = 1.25$
$1.38 \neq 1.25$

Not Similar

Sep 6-7:29 AM

Are these figures similar? If so, write a similarity statement.

3.



Angles ✓ Sides ✓

$\angle C = 90° = \angle Z$

$\angle A = 35° = \angle X$

$\angle B = 55° = \angle Y$

$\frac{\overline{ZY}}{\overline{CB}}$ $\frac{20}{32} = .625$

$\frac{\overline{CA}}{\overline{ZX}}$ $\frac{15}{24} = .625$

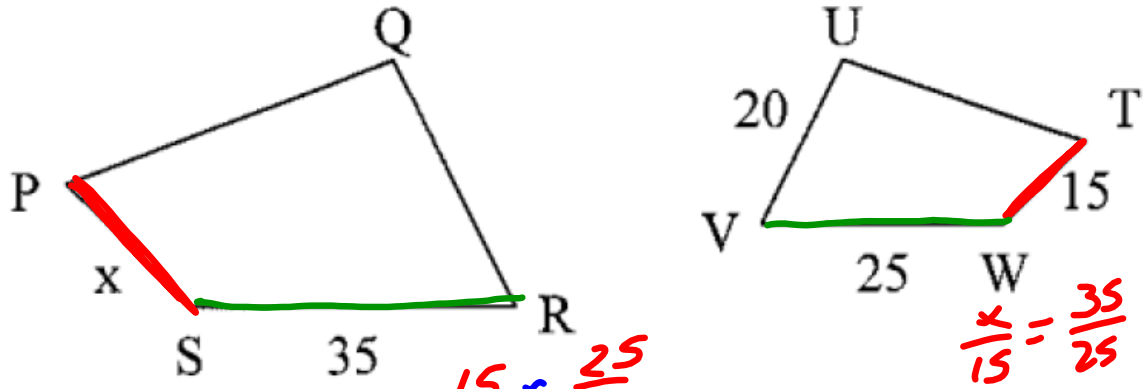
$\frac{\overline{AB}}{\overline{XY}}$ $\frac{25}{40} = .625$

$\triangle ACB \sim \triangle XZY$

Sep 6-7:29 AM

4. Given $\square PQRS \sim \square TUVW$.

Write a proportion to find the length of $\overline{PS}$.



$\frac{15}{x} = \frac{25}{35}$

$\frac{25x}{25} = \frac{525}{25}$

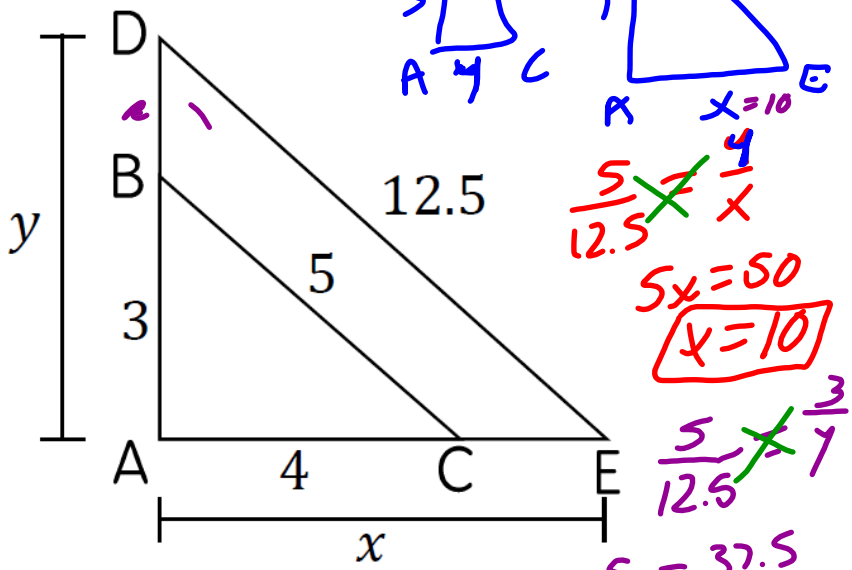
$x = 21 = \overline{PS}$

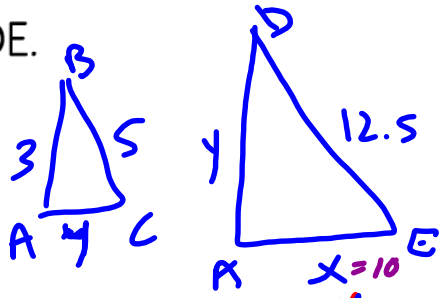
$\frac{x}{15} = \frac{35}{25}$

Sep 6-7:29 AM

5. Given $\Delta ABC \sim \Delta ADE$.

Solve for x and y.





$\frac{5}{12.5} = \frac{4}{x}$

$5x = 50$

$x = 10$

$\frac{5}{12.5} = \frac{3}{y}$

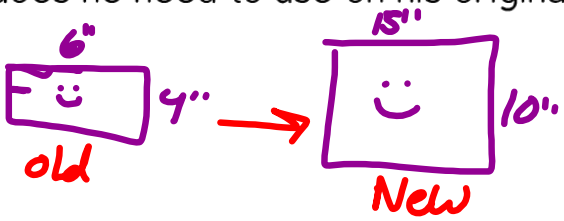
$5y = 37.5$

$y = 7.5$

Sep 6-7:30 AM

6. Sam went to Walgreens to enlarge a picture. Currently, his picture is a 4" x 6". He wants his new picture to be a 10" x 15". What scale factor does he need to use on his original?

$\frac{\text{New}}{\text{old}}$



$\frac{15}{6} = 2.5$

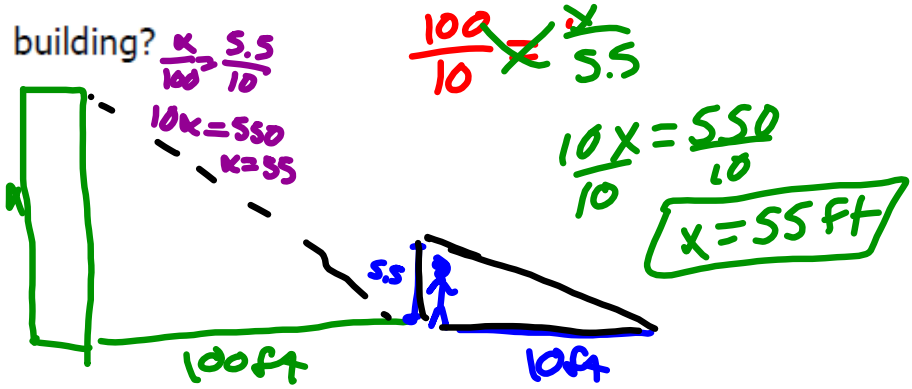
$\frac{10}{4} = 2.5$

SF > 1 = enlarge.

SF < 1 = Reduction

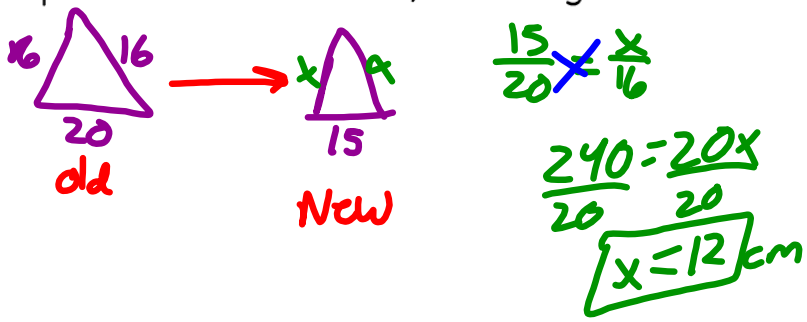
Sep 6-7:30 AM

7. Sally is standing next to a building and notices her shadow is 10 ft long. If the building's shadow is 100 ft long and she is 5.5 ft tall, how tall is the building?



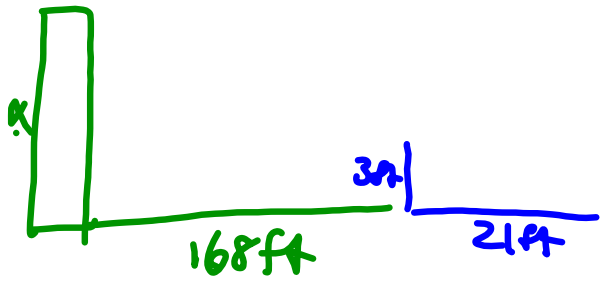
Sep 6-7:30 AM

8. Chris wants to reduce a triangular pattern for the quilt he is making. His current pattern sides are 16, 16, and 20 cm. If the longest side of the new pattern is to be 15 cm, how long should the other two sides be?



Sep 6-7:30 AM

9. A ~~36 inch~~ 3ft yardstick casts a 21-foot shadow, how tall is a building whose shadow is 168 feet?



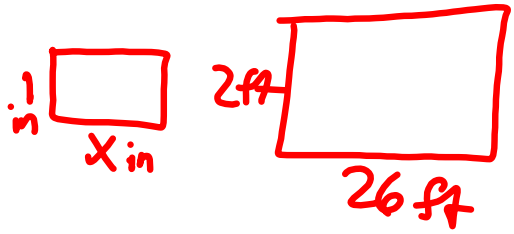
$\frac{168}{21} = \frac{x}{3}$

$\frac{21x}{21} = \frac{504}{21}$

$x = 24$ ft

Sep 6-7:30 AM

10. A model house has a scale of 1 in : 2 ft. If the real house is 26 ft. wide, then how wide is the model house?

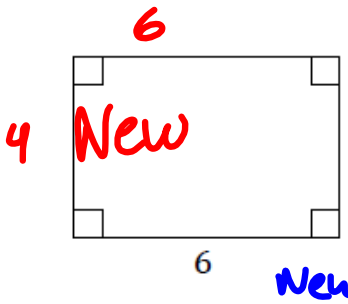


$\frac{1\text{ in}}{x} = \frac{2\text{ ft}}{26\text{ ft}}$ $\frac{1}{2} = \frac{x}{26}$

$\frac{26}{2} = \frac{2x}{2}$

$x = 13$ in

Sep 6-7:31 AM

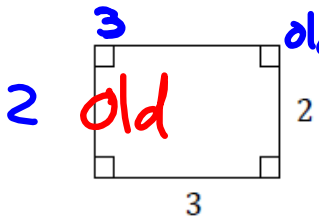


A. What is the **scale factor** from the ~~small rectangle~~ to the ~~big~~ rectangle? New / old

$\frac{4}{2} = 2$ $\frac{6}{3} = 2$

B. How did the **perimeter** change?

New / old $\frac{20}{10} = 2$ → Same as scale factor



C. How did the **area** change?

New = 24, old = 6, $\frac{24}{6} = 4$ (Scale factor)^2

Sep 6-7:31 AM

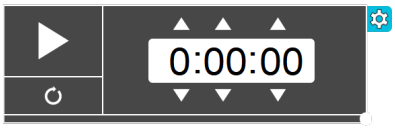
Classwork:

Complete the classwork about using dilations and similar figures.

HW: Finish the packet

Jul 31-9:12 PM

Skills Check



1. There is **NO communication/eye contact** during a skills check to anyone!

2. When you are DONE, **flip your skills check over.**

3. Work on your HW.

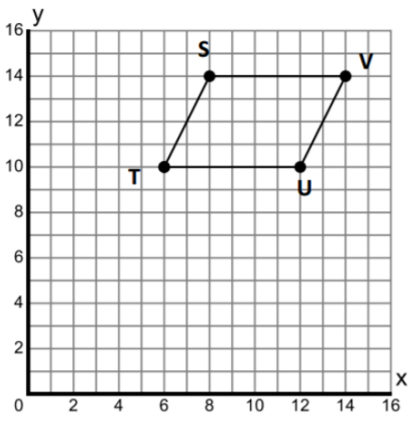
Aug 6-6:36 PM

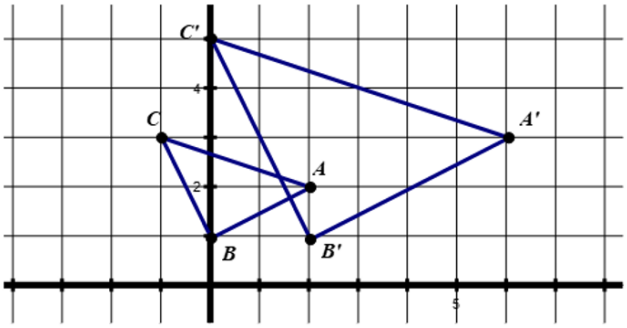
Name: _____ Date: _____ Block: _____

Dilations Skills Check **B**

1. **Graph image after the given scale factor.**

▱STUV and a scale factor of $\frac{1}{2}$.





2. **Where is the center of dilation?**

3. **What type of dilation was performed?**

4. **What is the scale factor?**