

Thursday 3/5/2020



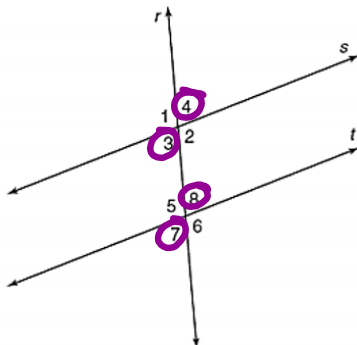
1. Grab Notes & Calc.
2. Put your phones/earbuds away.
3. Complete your Warm-Up (#11-15) on EOC Review.
4. Triangle Proportionality Notes, Practice
5. Dilation Notes (last 15 min.)

Good Morning!

Jul 31-9:37 PM

Warm-Up:

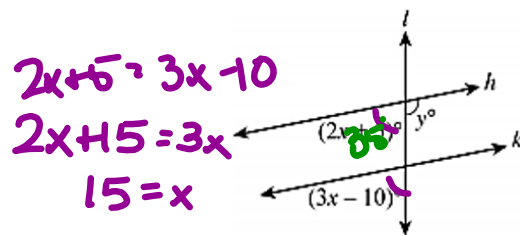
11) Lines s and t are parallel and r is a transversal.



Which angles are congruent to $\angle 4$?

- A. $\angle 2, \angle 5, \angle 8$ B. $\angle 3, \angle 5, \angle 7$
 C. $\angle 2, \angle 6, \angle 8$ **D. $\angle 3, \angle 7, \angle 8$**

12) In the drawing below, line h is parallel to line k .



$$2x + 5 = 3x - 10$$

$$2x + 15 = 3x$$

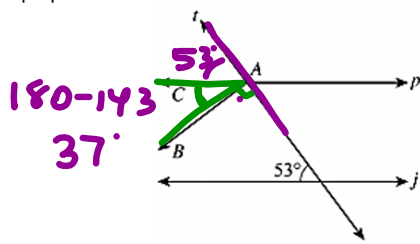
$$15 = x$$

What is the value of y ?

- A. 135 B. 15 C. 35 **D. 145**

$$180 - 35 = 145$$

13) In the drawing, line p is parallel to line j and line t is perpendicular to \overline{AB} .

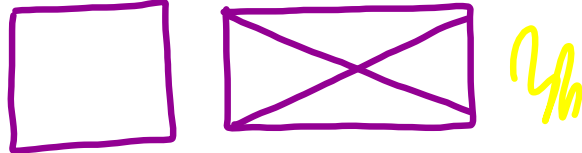


What is the measure of $\angle BAC$?

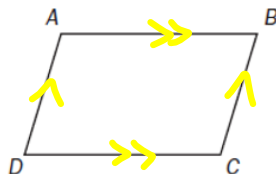
- A. 37°
- B. 53°
- C. 90°
- D. 127°

14) Which information is needed to show that a parallelogram is a rectangle?

- A. The diagonals bisect each other.
- B. The diagonals are congruent.
- C. The diagonals are congruent and perpendicular.
- D. The diagonals bisect each other and are perpendicular.



15) Look at quadrilateral ABCD.



Which information is needed to show that quadrilateral ABCD is a parallelogram?

- A. Use the distance formula to show that diagonals AC and BD have the same length.
- B. Use the slope formula to show that segments AB and CD are perpendicular and segments AD and BC are perpendicular.
- C. Use the slope formula to show that segments AB and CD have the same slope and segments AD and BC have the same slope.
- D. Use the distance formula to show that segments AB and AD have the same length and segments CD and BC have the same length.

What am I learning today?

Learning Objective 2C.1

How to use the triangle proportionality theorem

Jul 31-6:18 PM

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

I can...Use parallel lines in a triangle or 3 parallel lines cut with a transversal to create proportional sides

$$\frac{1}{2} = \frac{2}{4}$$

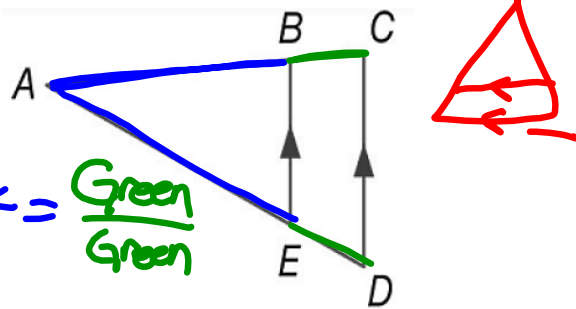
Jul 31-6:18 PM

Triangle Proportionality Theorem

If a line is PARALLEL to one side of a triangle and it INTERSECTS the other two sides, then it divides the sides into segments of PROPORTIONAL lengths

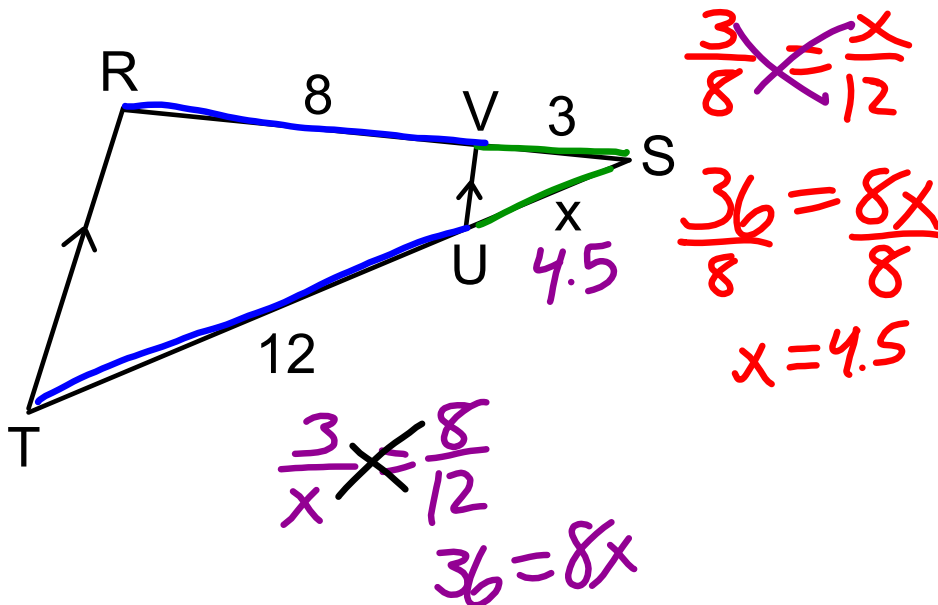
If $\overline{BE} \parallel \overline{CD}$, then $\frac{AB}{BC} = \frac{AE}{ED}$

$\frac{\text{Blue}}{\text{Green}} = \frac{\text{Blue}}{\text{Green}}$ OR $\frac{\text{Blue}}{\text{Blue}} = \frac{\text{Green}}{\text{Green}}$



Aug 31-8:05 AM

If $\overline{RT} \parallel \overline{VU}$, $SV = 3$, $VR = 8$, and $UT = 12$. Find SU .



Aug 31-8:07 AM

If $\overline{AC} \parallel \overline{XY}$, $AX = 4$, $XB = 10.5$, and $CB = 21.75$. Find BY .

Handwritten work for the first problem:

$$\frac{10.5}{4} = \frac{x}{21.75 - x}$$

$$4x = 10.5(21.75 - x)$$

$$4x = 228.375 - 10.5x$$

$$14.5x = 228.375$$

$$x = \frac{228.375}{14.5}$$

$$x = 15.75$$

Aug 31-8:07 AM

If $\overline{TU} \parallel \overline{QS}$, $QR = 10$, $QT = 2$, $SR = x$, and $SU = 4$. Solve for x .

Handwritten work for the second problem:

$$\frac{2}{10} = \frac{4}{x}$$

$$2x = 40$$

$$x = 20$$

$$\frac{2}{4} = \frac{8}{x-4}$$

$$2(x-4) = 32$$

$$2x - 8 = 32$$

$$2x = 40$$

$$x = \frac{40}{2}$$

$$x = 20$$

$$4 + m = x$$

$$-4 \quad -4$$

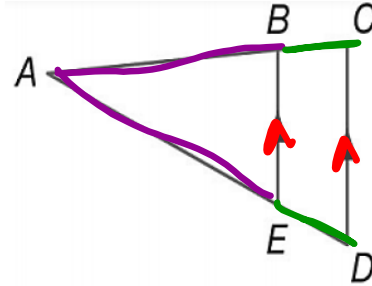
$$m = x - 4$$

Aug 31-8:08 AM

(REVERSE)
Converse of Triangle Proportionality Theorem

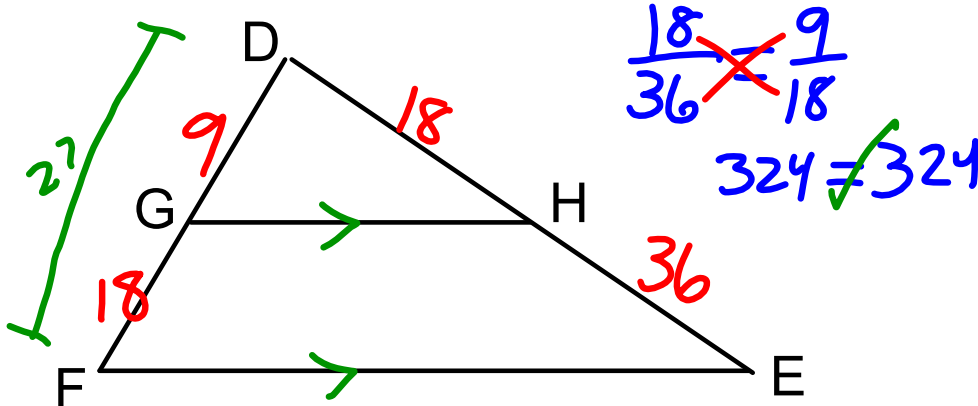
If a line intersects two sides of a triangle and separates the sides into PROPORTIONAL corresponding segments, then the line is PARALLEL to the third side of the triangle.

If $\frac{AB}{BC} = \frac{AE}{ED}$, then $\overline{BE} \parallel \overline{CD}$



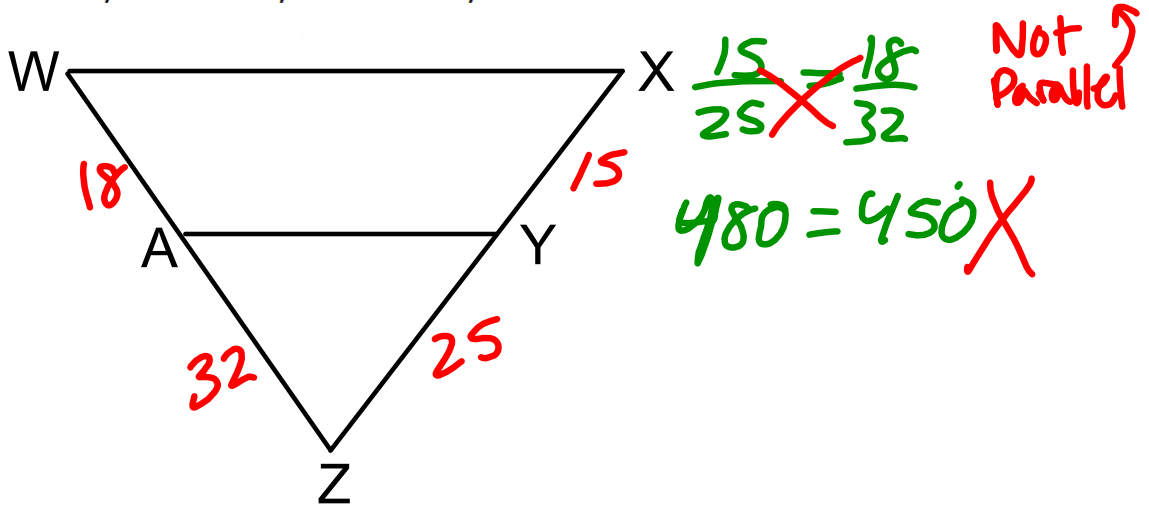
Aug 31-8:08 AM

$DH = 18$, $HE = 36$, $DG = 9$, and $DF = 27$. Determine if $\overline{GH} \parallel \overline{FE}$.



Aug 31-8:08 AM

$XY = 15$, $YZ = 25$, $WA = 18$, and $AZ = 32$. Determine if $\overline{WX} \parallel \overline{AY}$.

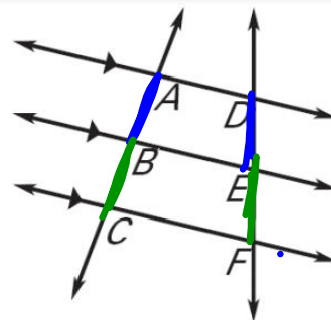


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Two-Transversal Proportionality

If 3 or more parallel lines intersect 2 transversals, then they divide the transversals PROPORTIONALLY

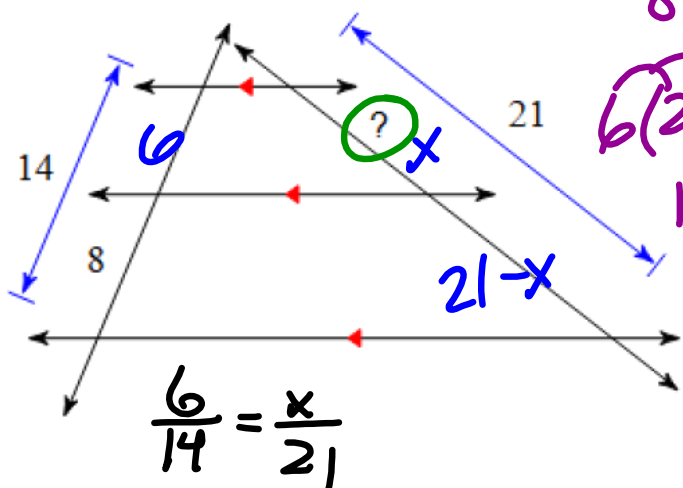
If $\overline{AD} \parallel \overline{BE} \parallel \overline{CF}$, then $\frac{AB}{BC} = \frac{DE}{EF}$



Aug 31-8:08 AM

Example:

Solve for the missing length.



$$\frac{6}{8} = \frac{x}{21-x}$$

$$6(21-x) = 8x$$

$$126 - 6x = 8x$$

$$+6x \quad +6x$$

$$126 = \frac{14x}{14}$$

$$x = 9$$

Feb 26-5:45 PM

Classwork:

Complete the classwork about using triangle proportionality.

HW: Finish the packet.

Last 15 minutes today: DILATIONS NOTES

Jul 31-9:12 PM