Questions on 6.4 HW?

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Apr 8-8:30 AM

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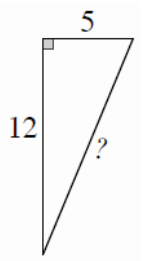
Find the missing side in each right triangle. $a^2+b^2=c^2 \rightarrow$ Pythagorean Theorem

1.



2.

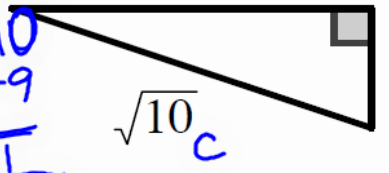
$3^2+b^2=\sqrt{10}^2$

$9+b^2=10$

$-9 \quad -9$

$\sqrt{b^2}=\sqrt{1}$

$b=1$



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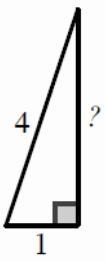

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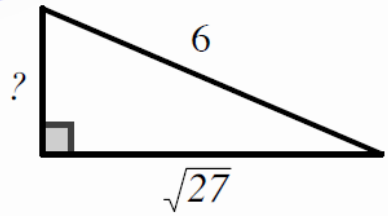
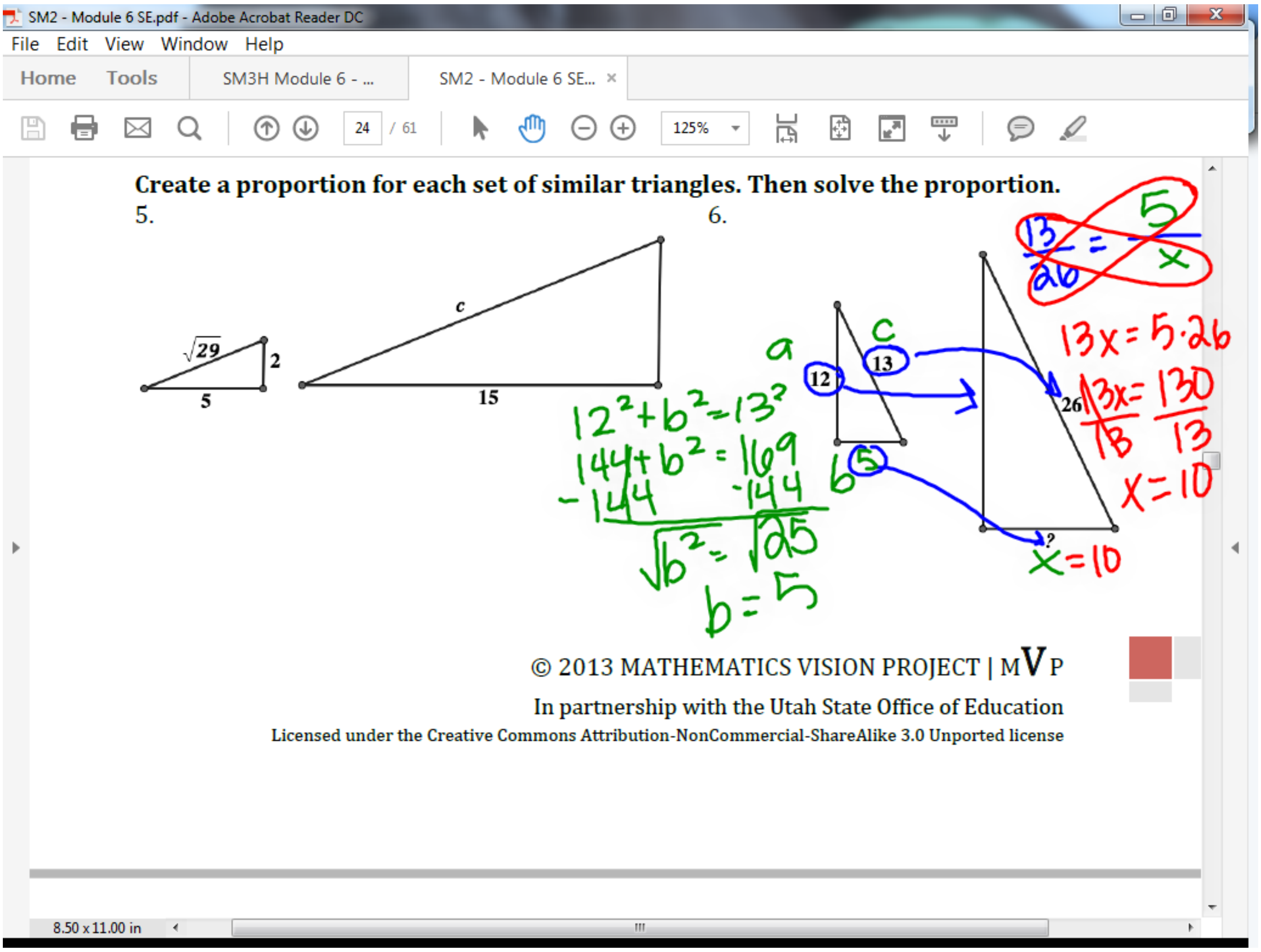


Create a proportion for each set of similar triangles. Then solve the proportion.

5.

6.

8.50 x 11.00 in



Create a proportion for each set of similar triangles. Then solve the proportion.

5. 6.

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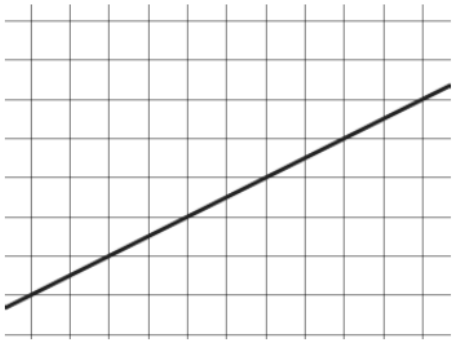
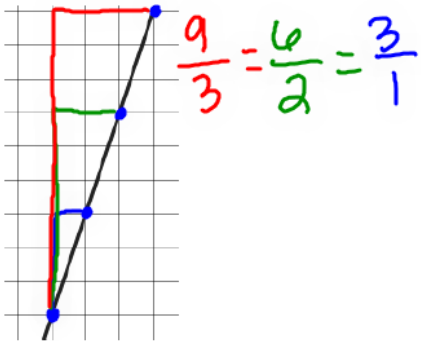
Each line below has several triangles that can be used to determine the slope. Draw in three slope defining triangles of different sizes for each line and then create the ratio of rise to run for each.

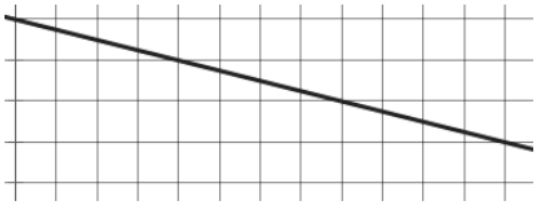
15.



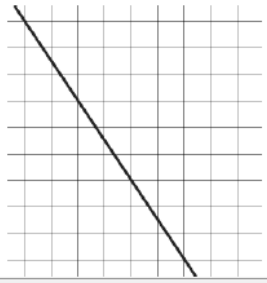
16.



17.



18.



8.50 x 11.00 in

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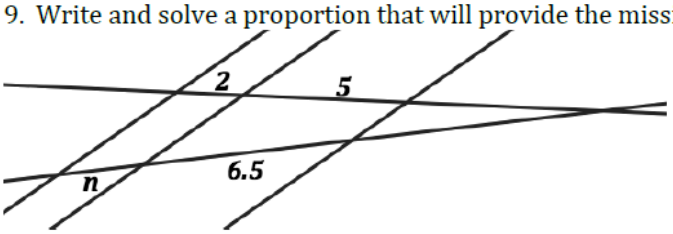
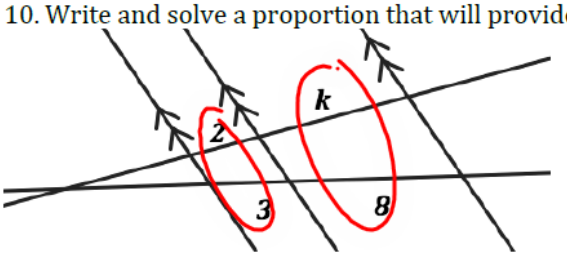
9. Write and solve a proportion that will provide the missing length.



10. Write and solve a proportion that will provide the missing length.



$\frac{2}{3} = \frac{k}{8}$

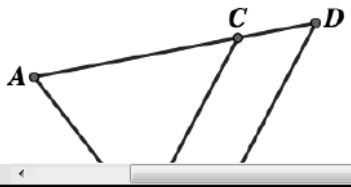
$2 \cdot 8 = 3k$

$\frac{16}{3} = \frac{3k}{3}$

$k = \frac{16}{3} \approx 5.3$

For questions 11 – 14 find and label the parallel lines. (i.e. $\overline{AB} \parallel \overline{CD}$) Then write a similarity statement for the triangles that are similar. (i.e. $\Delta ABC \sim \Delta XYZ$)

11.



12.

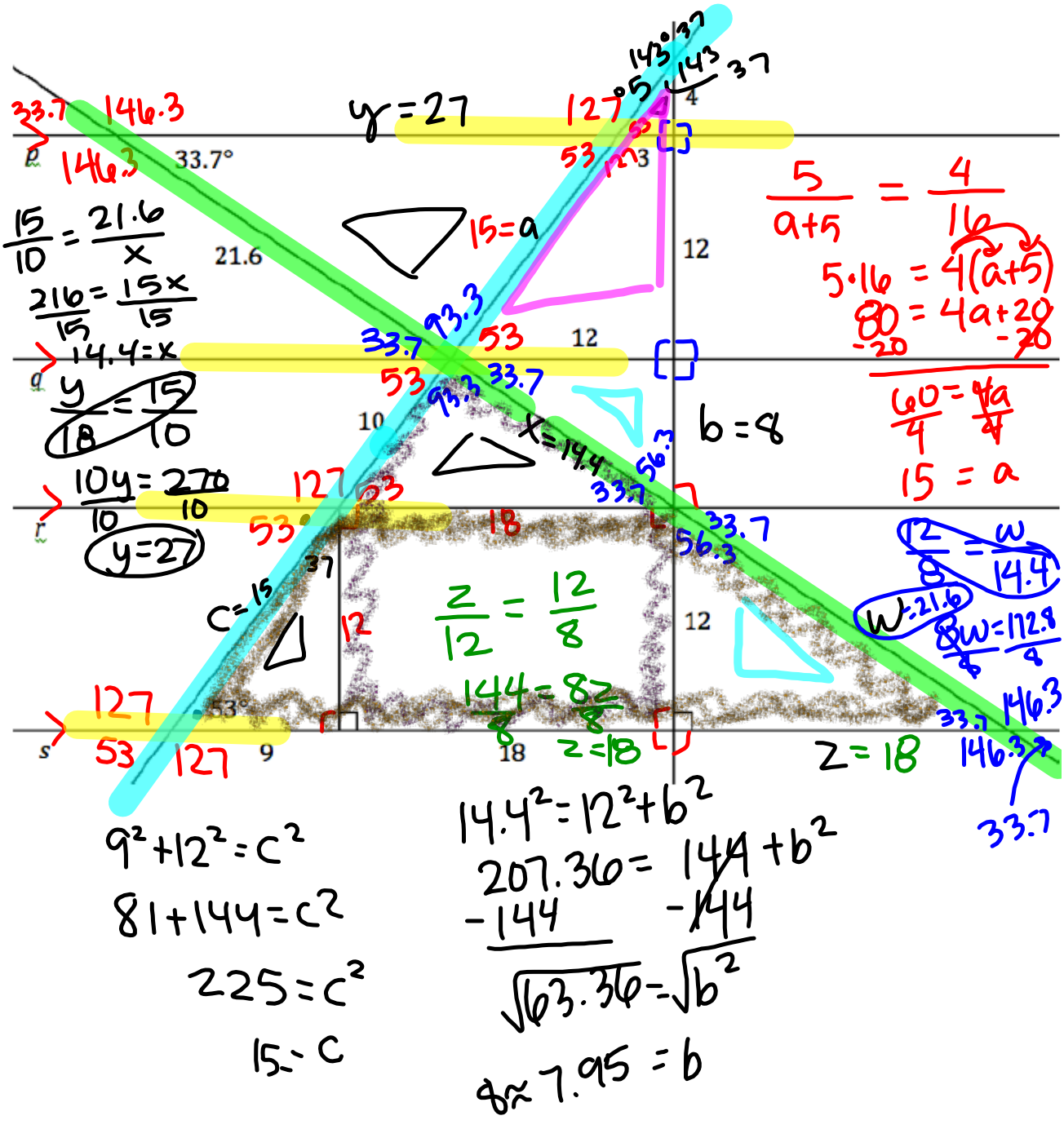
8.50 x 11.00 in

6.5 Measured Reasoning

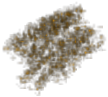
A Practice Understanding Task

Find the measures of all missing sides and angles by using geometric reasoning, not rulers and protractors. If you think a measurement is impossible to find, identify what information you are missing.

Lines p, q, r, and s are all parallel.



1. Identify at least three different quadrilaterals in the diagram. Find the sum of the interior angles for each quadrilateral. Make a conjecture about the sum of the interior angles of a quadrilateral.

 $= 53+33.7+90+56.3+90+37 = 360°$

Conjecture: Interior ∠s sum to 360°

2. Identify at least three different pentagons in the diagram. Find the sum of the interior angles for each pentagon. Make a conjecture about the sum of the interior angles of a pentagon.

 $= 90+90+90+90+33.7+93.3+53 = 540°$

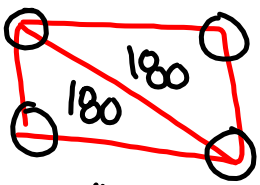
Conjecture: Interior ∠s sum to 540°

3. Do you see a pattern in the sum of the angles of a polygon as the number of sides increases? How can you describe this pattern symbolically?

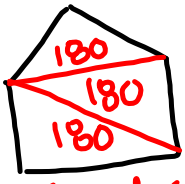
n = # of sides

$180(n-2)$

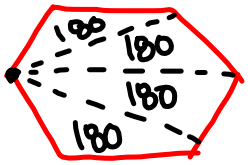
4. How can you convince yourself that this pattern holds for all *n*-gons?



4 sides
2 Δs
2(180)
360



5 sides
3 Δs
3(180)
540



6 sides
4 Δs
4(180)
720

7 sides
5 Δs

Homework

Finish 6.5 "Ready, Set, Go"

Mar 28-9:36 AM