Extra Credit Options – Choose Your Own Adventure

Question	Resource	Points	Score (teacher use)
Design a real world application for circumcenter.	https://sites.google.com/site/themathematicsbehinddoritos/real-life-examples	4	
Design a real world application for orthocenter.	https://sites.google.com/site/themathematicsbehinddoritos/real-life-examples	4	
Design a real world application for median.	https://sites.google.com/site/themathematicsbehinddoritos/real-life-examples	4	
Design a real world application for orthocenter.	https://sites.google.com/site/themathematicsbehinddoritos/real-life-examples	4	
Write a proof involving an angle bisector.+		2	
Write a proof involving perpendicular bisector of a segment.+		2	
Write a proof involving an altitude.+		2	
Write a proof involving a median.+		2	
Make a video involving any of the main geometry concepts we've studied thus far this year. 2-4 minutes in length. May be done with a partner or partners. May be posted on my website or shared in class.	• https://www.youtube.com/watch?v=kbxkHYije7s&list=PLZ1F9qXFD_xv8pfCpc5sXOHImMo2gxhyM • https://www.youtube.com/watch?v=8eD3wODClh8&index=2&list=PLZ1F9qXFD_xv8pfCpc5sXOHImMo2gxhyM • https://www.youtube.com/watch?v=0Z1aUhGCZs0&index=3&list=PLZ1F9qXFD_xv8pfCpc5sXOHImMo2gxhyM	12-20^	
Given the vertices of triangle ABC are A(4,2), B(-18,-2) and C(-12,6), determine the following: • The equation for the altitude from C to $\overline{AB}$ • The equation of the perpendicular bisector of $\overline{AB}$ • The equation of the median from C to $\overline{AB}$		4	

Given triangle ABC with vertices A(0,4), (0,-8), and C(4,0), determine the coordinates for the following points of concurrency: • Orthocenter • Circumcenter	http://www.bscsd.org/webpages/sgrubeedwards/geometry.cfm?subpage=13357	4	
Create & solve your own preposterous parallel problem that involves parallel and perpendicular lines or drawing in auxiliary lines. Can you make it real-world?		4-8^	
Go on the webquest at http://zunal.com/webquest.php?w=51076 (4 tasks)		4 pts each task	
Make a word wall for important vocabulary / theorems / criteria / concepts for one of the units we've studied so far. Include examples where possible.	Use your lesson summaries	4-8 pts each unit	
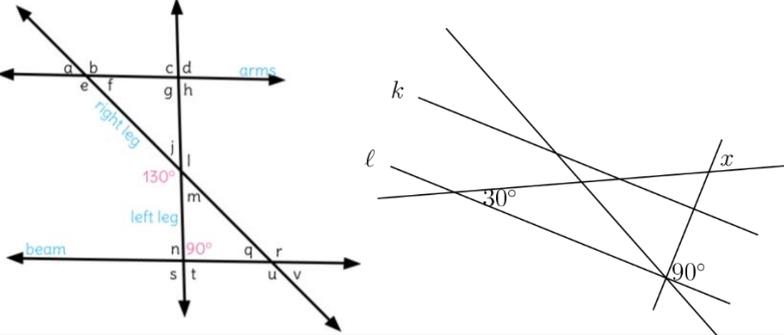
* Describe the situation, draw a representation, and explain why this point of concurrency is the best.

+ You determine the drawing, the "given", the "prove", and then write out the proof.
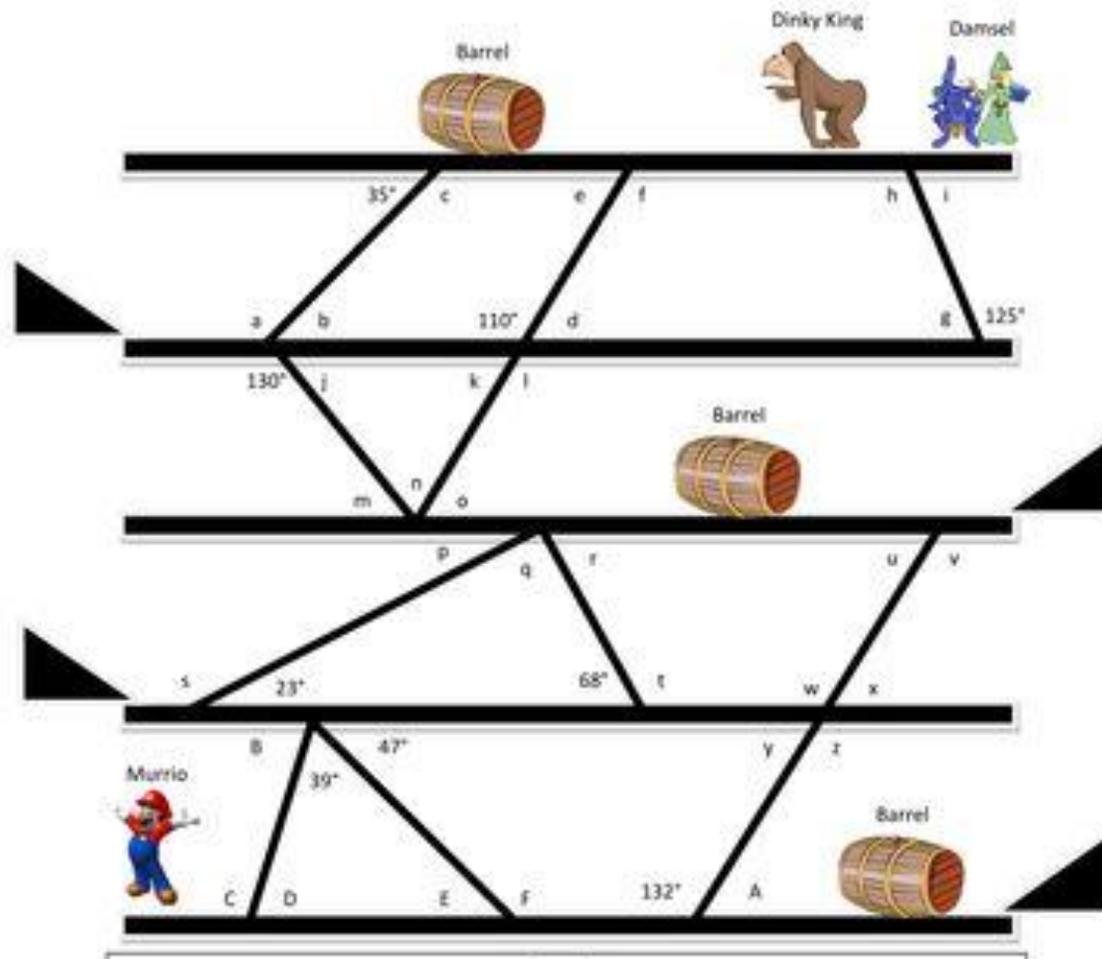 Awesome ones may be used in future lessons or on future assessments…

^ Depends on the degree of difficulty and quality of the project.

Dinky King – The Next Generation of Platform Game!

I need your help – I was never any good at math and I'm designing a new game called "Dinky King". It's a platform game where my main character, Murrio has to save a damsel in distress by jumping over the barrels rolled down the platforms at him. Murrio climbs the ladders, which will be at different angles, in order to get to the damsel and free her.

All the platforms are parallel with a wedge at each end to make the barrel roll – hope that helps.

We are so close to completing it but I can't calculate all the angles that the computer programmer needs in order to finish the game. Please find **all** the missing angles on the game:

https://s-media-cache-ak0.pinimg.com/736x/c0/ff/93/c0ff9339401bbb1f55107b6b39ff98c8.jpg

https://www.pinterest.com/explore/pythagorean-theorem/

http://www.teachersnotebook.com/product/AmazingMathematics/parallel-lines-cut-by-a-transversal-maze-identifying-angle-pairs

Dinky King 5 – Pythagorean Platforms

Dinky King's creators have designed a new platform game where our hero Murrio has to race along various paths avoiding barrels, but the designers aren't sure how long some of the paths have to be.

Can you help by finding the lengths marked with a letter rather than a number?

Dinky King

Damsel

Barrel

e

d

7.2cm

8cm

4.5cm

Barrel

e

c

5cm

2cm

b

Barrel

3cm

9cm