

MATH 7 Accelerated: Week of April 27

- Go through the slides (notes) and work through the examples on a separate piece of paper.
- Do the given practice problems (again, on a separate piece of paper).
- Check your answers with the key given (last slide).
- Take a photo or scan in your work and submit it in Google Classroom. If you have questions or would like feedback on your work, add that as a comment with your submitted work.
- The other option for turn in is to send it in on Monday when the new packet is available.
- Check your school email/google calendar for online help sessions via Zoom.

Day 1: Slides 2-5
Day 2: Slides 6-10
Day 3: Slide 11
Answers on Slide 12

Day 1

L7: Classifying Triangles

Target: Classify triangles based on sides and angles.

Vocabulary

Classifying by angles:

Acute Triangle: All three angles are acute.

Right Triangle: One angle is a right angle; the other two angles are acute.

Obtuse Triangle: One angle is an obtuse angle; the other two angles are acute.

Classifying by side lengths:

Equilateral Triangle: All sides are the same length.

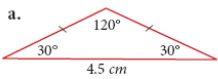
Isosceles Triangle: At least two sides with the same measure.

Scalene Triangle: No sides with the same measure.

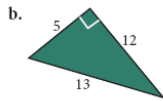
Equiangular Triangle: An acute triangle with three congruent angles.

Example 1

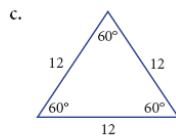
Classify each triangle by its sides and angle measures.



Isosceles, obtuse triangle



Scalene, right triangle

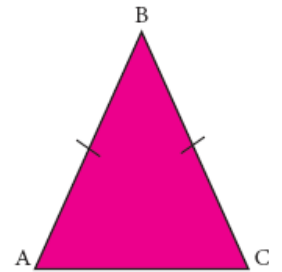


Equilateral, acute triangle

Example 2

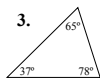
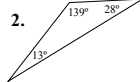
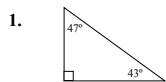
Sketch a diagram to represent an acute, isosceles triangle named $\triangle ABC$.

- In order to be an acute triangle all angles must be less than 90° .
- Since the triangle is isosceles, at least two sides must be the same length.
- Tick marks can be used to show which sides are equal lengths in the sketch.

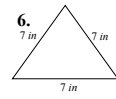


L7 Practice Problems:

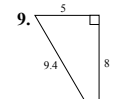
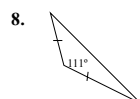
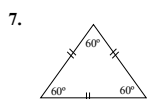
Classify each triangle by its angle measures.



Classify each triangle by its side lengths.



Classify each triangle by its angle measures and side lengths.



END DAY 1

Day 2

L8: Angle Sum of a Triangle

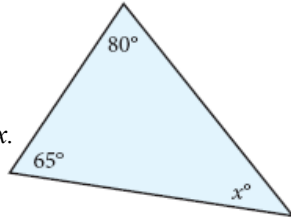
Target: Find angle measures in a triangle.

Triangle Angle Sum

The sum of the measures of the angles of a triangle is 180° .

Example 1

Set up an equation and solve for x .



The sum of the angles of a triangle is 180° .

Write an equation.

$$80 + 65 + x = 180$$

Combine like terms.

$$145 + x = 180$$

Subtract 145 from each side.

$$\begin{array}{r} 145 + x = 180 \\ -145 \quad -145 \\ \hline x = 35 \end{array}$$

The measure of the missing angle is 35° .

Example 2a

$\triangle YOU$ has the angle measures listed below:

$$m\angle Y = 70^\circ$$

$$m\angle O = (3x - 10)^\circ$$

$$m\angle U = 7x^\circ$$

*Set up an equation and solve for x .

The angles of a triangle sum to 180° .

$$70 + 3x - 10 + 7x = 180$$

Combine like terms.

$$60 + 10x = 180$$

Subtract 60 from each side.

$$\begin{array}{r} 60 + 10x = 180 \\ -60 \quad -60 \\ \hline 10x = 120 \end{array}$$

Divide by 10 on each side.

$$\begin{array}{r} 10x = 120 \\ \hline 10 \quad 10 \\ \hline x = 12 \end{array}$$

Example 2b

$\triangle YOU$ has the angle measures listed below:

$$m\angle Y = 70^\circ$$

$$m\angle O = (3x - 10)^\circ$$

$$m\angle U = 7x^\circ$$

*Find the degree measure of each angle.

You found that $x = 12$ in Example 2a.

Write the given expression for each angle.

$$m\angle O = (3x - 10)^\circ$$

$$m\angle U = 7x^\circ$$

Substitute 12 for x .

$$= 3(12) - 10$$

$$= 7(12)$$

Multiply.

$$= 36 - 10$$

$$= 84$$

Subtract.

$$= 26$$

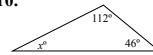
$$m\angle O = 26^\circ$$

$$m\angle U = 84^\circ$$

L8 Practice Problems:

Find the degree of each missing angle.

10.



11.



12.

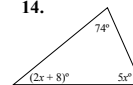


Set up an equation and solve for x .

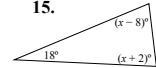
13.



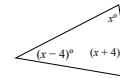
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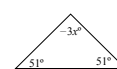
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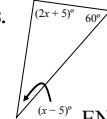
16.



17.

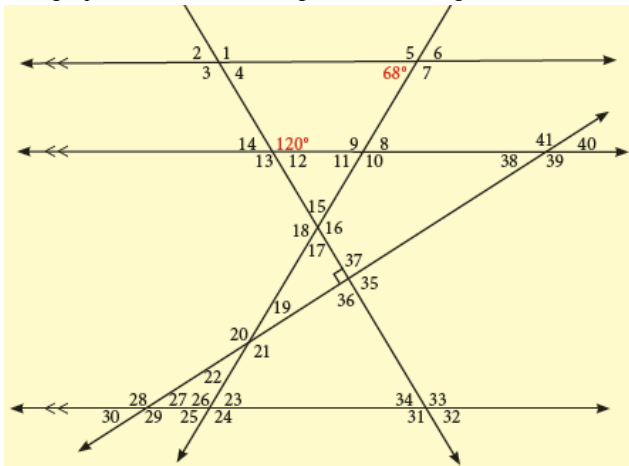


18.



END DAY 2

Day 3: Find the measure of each numbered angle. Use what you've learned about angle pairs and the interior angle sum of a triangle.



Practice Problems: ANSWER PAGE

Day 3:	14. 60°	28. 150°	41. 150°
	15. 20°	29. 30°	
	16. 128°	30. 30°	
	17. 52°	31. 120°	
	18. 120°	32. 60°	
	19. 38°	33. 120°	
	20. 142°	34. 60°	
	21. 142°	35. 90°	
	22. 38°	36. 90°	
	23. 68°	37. 90°	
	24. 112°	38. 30°	
	25. 68°	39. 150°	
	26. 112°	40. 30°	
	27. 30°	41. 150°	

Day 2:	10. $x = 22$
	11. $x = 57$
	12. $x = 60$
	13. $x = 15$
	14. $x = 14$
	15. $x = 84$
	16. $x = 60$
	17. $x = -26$
	18. $x = 40$

Day 1:	1. Right
	2. Obtuse
	3. Acute
	4. Isosceles
	5. Scalene
	6. Equilateral
	7. Acute (or equiangular)
	8. Isosceles, obtuse
	9. Right, scalene

MATH 7A: LAST SLIDE for this week!