

Zero The Math Hero

Standard Mathematical Elements - Lesson 5

Lesson 5 provides a discussion of the basic definition of a triangle.

Lesson 5 demonstrates how to classify triangles according to their side lengths and/or angle measures. The following triangle types are included:

- scalene
- isosceles
- equilateral
- acute
- right
- obtuse
- equiangular

Zero the Math Hero – Lesson 5

Lesson 5 – Definitions

triangle - the figure formed by three segments joining three noncollinear points

congruent segments - segments that have the same length

congruent angles - angles that have the same measure

scalene triangle - a triangle that has no congruent sides

isosceles triangle - a triangle with at least two sides congruent

equilateral triangle - a triangle that has all three sides congruent

acute triangle - a triangle whose angles are each less than 90 degrees

right triangle - a triangle that has one right angle

obtuse triangle - a triangle that has one obtuse angle

equiangular triangle - a triangle with all three angles congruent

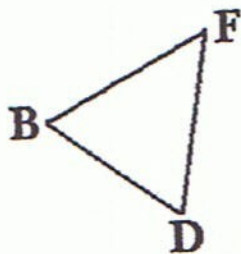
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Lesson 5 - Practice Problems

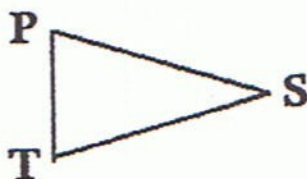
Classifying Triangles

1. Name the sides of this triangle.



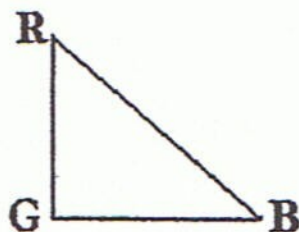
1. _____

2. Name the interior angles.



2. _____

3. Name the vertices of this triangle.



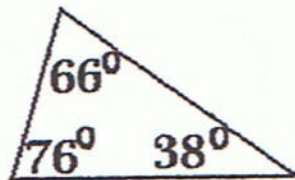
3. _____

4.- 7. Classify the triangles by their angles.

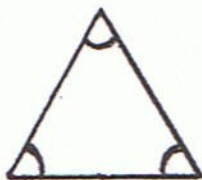
4.



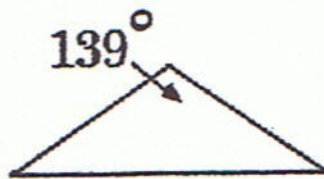
5.



6.



7.



4. _____

5. _____

6. _____

7. _____

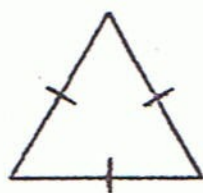
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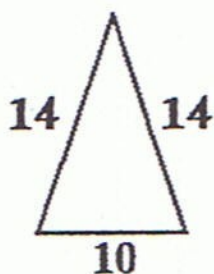
Lesson 5 - Practice Problems - Continued
Classifying Triangles

8. - 10. Classify the triangles by their sides.

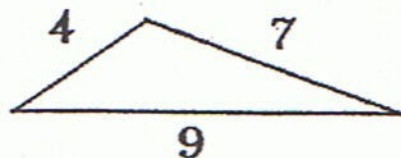
8.



9.



10.



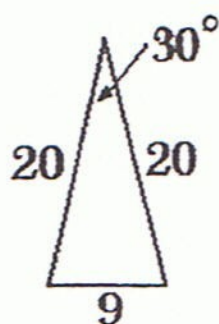
8. _____

9. _____

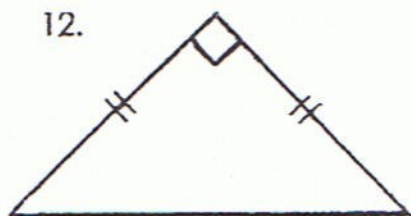
10. _____

11. - 13. Classify the triangles by their sides
and by their angles.

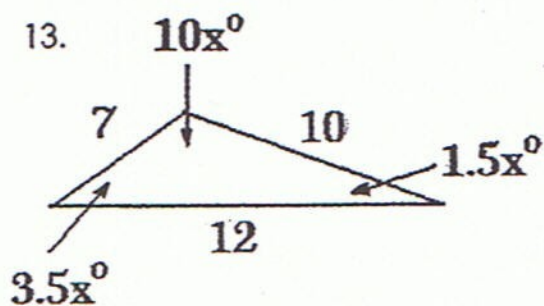
11.



12.



13.



11. _____

12. _____

13. _____

Name: _____

Date: _____

Quiz – Definitions
Zero the Math Hero – Lesson 5

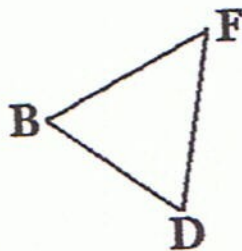
Directions: Fill in each blank with the letter that corresponds to the correct answer, A-J.

- | | |
|--|-------------------------|
| 1. _____ a triangle that has one obtuse angle | A. triangle |
| 2. _____ a triangle that has all three angles congruent | B. congruent segments |
| 3. _____ the figure formed by three segments joining three noncollinear points | C. congruent angles |
| 4. _____ a triangle whose angles are each less than 90 degrees | D. scalene triangle |
| 5. _____ segments that have the same length | E. isosceles triangle |
| 6. _____ a triangle that has one right angle | F. equilateral triangle |
| 7. _____ angles that have the same measure | G. acute triangle |
| 8. _____ a triangle that has no congruent sides | H. right triangle |
| 9. _____ a triangle with at least two sides congruent | I. obtuse triangle |
| 10. _____ a triangle that has all three sides congruent | J. equiangular triangle |

Lesson 5 - Practice Problems

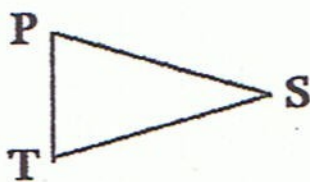
Classifying Triangles

1. Name the sides of this triangle.



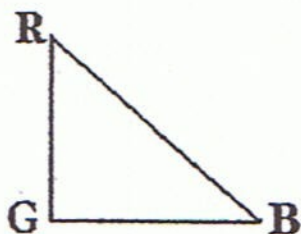
1. $\overline{BF}, \overline{FD}, \overline{BD}$
 (or $\overline{FB}, \overline{DF}, \overline{DB}$)

2. Name the interior angles.



2. $\angle P, \angle T, \angle S$

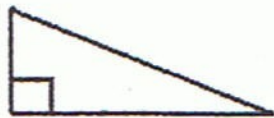
3. Name the vertices of this triangle.



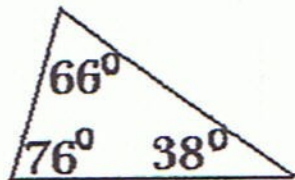
3. R, G, B

- 4.- 7. Classify the triangles by their angles.

4.



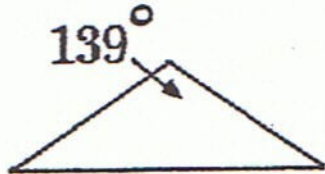
5.



6.



7.



- 4.
- right
- 5.
- acute
- 6.
- equiangular
-
- (or acute) 7.
- obtuse

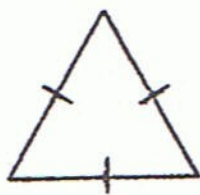
Name: ANSWER KEY

Date: _____

Lesson 5 - Practice Problems - Continued
Classifying Triangles

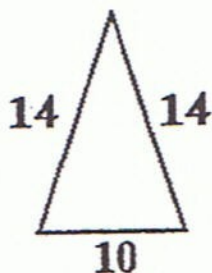
8. - 10. Classify the triangles by their sides.

8.



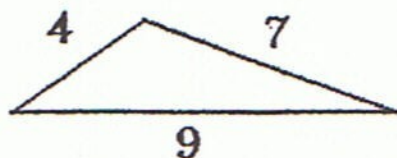
8. equilateral

9.



9. isosceles

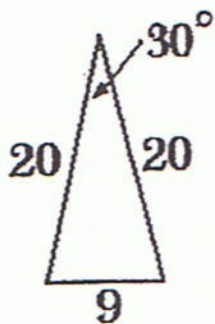
10.



10. scalene

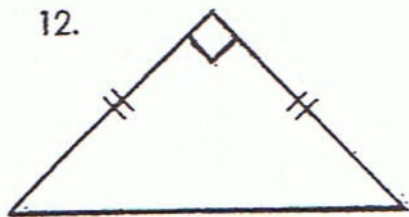
11. - 13. Classify the triangles by their sides
and by their angles.

11.



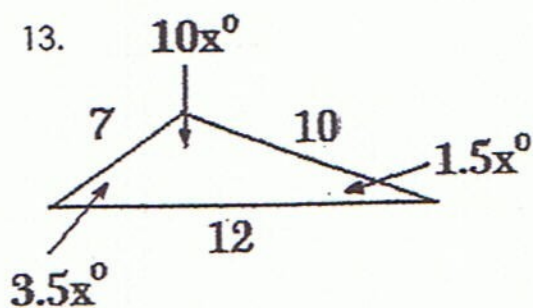
11. acute isosceles

12.



12. right isosceles

13.



13. obtuse scalene

Name: ANSWER KEY

Date: _____

Quiz – Definitions
Zero the Math Hero – Lesson 5

Directions: Fill in each blank with the letter that corresponds to the correct answer, A-J.

- | | |
|---|-------------------------|
| 1. <u>I</u> a triangle that has one obtuse angle | A. triangle |
| 2. <u>J</u> a triangle that has all three angles congruent | B. congruent segments |
| 3. <u>A</u> the figure formed by three segments joining three noncollinear points | C. congruent angles |
| 4. <u>G</u> a triangle whose angles are each less than 90 degrees | D. scalene triangle |
| 5. <u>B</u> segments that have the same length | E. isosceles triangle |
| 6. <u>H</u> a triangle that has one right angle | F. equilateral triangle |
| 7. <u>C</u> angles that have the same measure | G. acute triangle |
| 8. <u>D</u> a triangle that has no congruent sides | H. right triangle |
| 9. <u>E</u> a triangle with at least two sides congruent | I. obtuse triangle |
| 10. <u>F</u> a triangle that has all three sides congruent | J. equiangular triangle |