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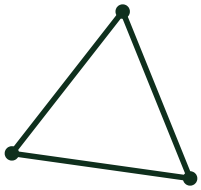
bring a ruler and the folded corner

LINES & ANGLES · GRADE 4 · 4.G.A.1 WITH 4.G.A.2 AND 4.G.A.3

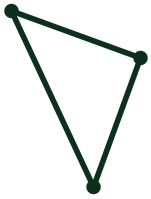
Sort It Every Way

Name _____ Date _____ Correct _____ / 23

1 **Two names each** *- one for the sides, one for the angles, and both rows get filled*

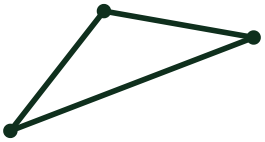


(a)



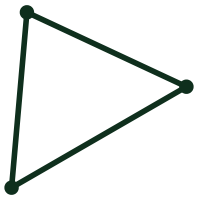
(b)

(c)



(d)

(e)



(f)

figure	by side length	by angle size
1. (a)		
2. (b)		
3. (c)		
4. (d)		
5. (e)		
6. (f)		

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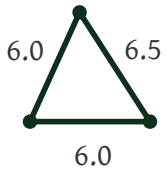
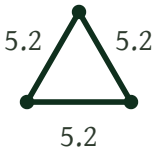
Sort It Every Way · 4.G.A.2

Name _____ Date _____

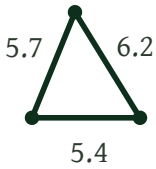
2 Measure before you name - *the numbers on the sides decide it, not how the drawing looks*



(g) centimeters



(h) centimeters



(i) centimeters

Name each one by its side lengths.

7. (g) _____ **8.** (h) _____ **9.** (i) _____

10. One of the three carries a second true name as well, because every triangle of its kind is also of the other kind. Which letter, and what is the second name? _____

_____

11. Two of these look like they have equal sides and only one of them has. Say what you would check to be sure, and where you would look for it.

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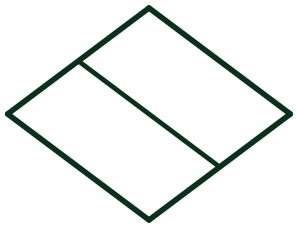
Sort It Every Way · 4.G.A.3

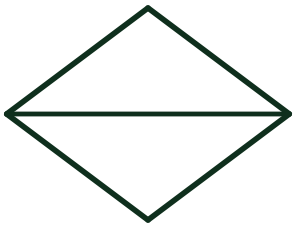
Name _____ Date _____

3 Fold it, do not just halve it *- one part has to land on the other, not just match it in size*



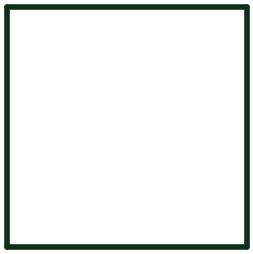
12. Is the drawn line a fold line?

yes no



13. Is the drawn line a fold line?

yes no



14. Draw every fold line. How many? _____

15. Draw every fold line. How many? _____

16. The line in question 12 cuts the shape into two pieces of exactly the same size, and it is still not a fold line. Say how you can tell the difference.

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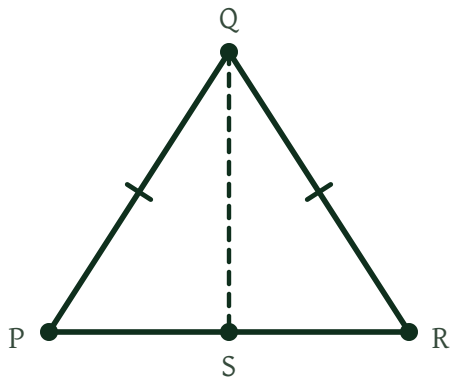
Sort It Every Way · 4.G.A.1

Name _____ Date _____

4 One figure, everything at once *- the tick marks say the two long sides are equal*



17. Name the angle at the top in three letters: angle _____

18. QS meets PR square on. Draw a small square at **each** of the two corners that makes.

19. Name triangle PQR by its side lengths: _____

20. By its angles it is acute right obtuse

21. Is QS a fold line? yes no

How many does PQR have? _____

22. Now take the smaller triangle PQS on its own. By sides it is _____ and by angles it is _____

23. Triangle PQR has no square corner, but QS cuts it into two triangles that do. Say how that can happen.

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Answer Key

LINES & ANGLES · GRADE 4 · 4.G.A.1 WITH 4.G.A.2 AND 4.G.A.3

Sort It Every Way

Two names each

1. (a) *equilateral*, *acute* · **2.** (b) *isosceles*, *right* · **3.** (c) *scalene*, *obtuse*

4. (d) *isosceles*, *obtuse* · **5.** (e) *scalene*, *right* · **6.** (f) *isosceles*, *acute*

Measure before you name

7. (g) *isosceles*, 6.0, 6.0 and 6.5 · **8.** (h) *equilateral* · **9.** (i) *scalene*, 5.4, 5.7 and 6.2

10. *h*, also *isosceles*. Three equal sides means at least two are.

11. Read the two side lengths and compare the numbers. On (g) they are 6.0 and 6.5, which is a difference the eye lets past at this size.

Fold it

12. *no*. Folded on it, the pieces do not land on one another. · **13.** *yes*, and so is the other diagonal.

14. *4*, two through the side middles and two corner to corner. · **15.** *2*.

16. Fold it, or turn the tracing over on the line. Equal size is not the test. The test is whether one piece lands exactly on the other.

One figure, everything

17. *angle PQR* or angle RQP · **18.** squares at *angle PSQ* and *angle QSR*

19. *isosceles* · **20.** *acute*, the widest angle sits at Q · **21.** *yes*, and PQR has *1*

22. PQS is *scalene* and *right*. All three of its sides differ.

23. QS makes a new angle at S that neither P, Q nor R had. The corners of the small triangles are not the corners of the big one.

Mark page 1 by columns, not by figures. A page with the left column full and the right one blank is the whole finding: the student is treating the two sortings as a choice. Item 12 is the second one to check, and item 10 the third.