



LINES & ANGLES · GRADE 4 · 4.G.A.1

Compare It and Sort It

Name _____ Date _____ Correct _____ / 22

1 Which opening is bigger? - the arms can be any length, so read the gap, not the arms



left

right

1. the bigger opening is

left

right

the same



left

right

2. the bigger opening is

left

right

the same



left

right

3. the bigger opening is

left

right

the same



left

right

4. the bigger opening is

left

right

the same

5. In question 1 the two angles are the same size. Say how you can tell that without measuring either one.

Roots of Reason

Compare It and Sort It · 4.G.A.1

Name _____

Date _____

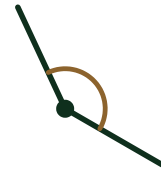
2 Put them in order - six openings, six tilts, and the tilt tells you nothing



(a)



(b)



(c)



(d)



(e)



(f)

6. Write the six letters from the smallest opening to the largest.

7. Exactly one of the six is a square corner. Which letter?

8. Nothing stands open in (e). Is it still an angle?

☐ yes

☐ no

9. What is that one called? _____

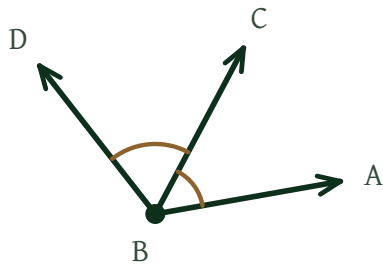
Roots of Reason

Compare It and Sort It · 4.G.A.1

Name _____

Date _____

3 Three arms, three angles - the corner letter goes in the middle every time



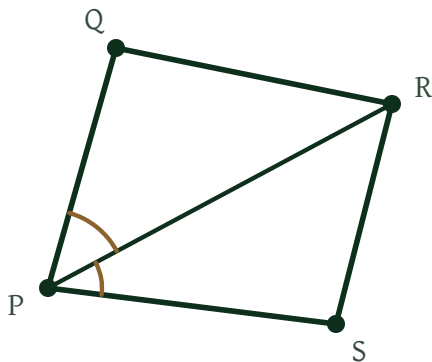
Three rays leave point **B**. That makes three different openings. Name each one in three letters.

10. between ray BA and ray BC angle _____

11. between ray BC and ray BD angle _____

12. the widest one on the figure angle _____

13. Which two fit together to make the widest one?
_____ and _____



14. The line from **P** to **R** cuts corner **P** into two openings. Name the two pieces, then the whole corner.

piece: angle _____ piece: angle _____

whole corner: angle _____

15. Jonah named a piece **angle QRP**. That name points at a corner somewhere else. Which one?

Roots of Reason

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4 The flat one - an angle with no gap in it is still an angle



One straight mark carries three points. Two arms leave Q, running opposite ways.

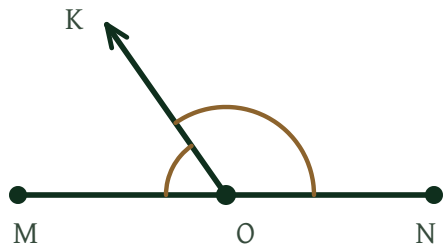
16. Is there an angle at Q?

☐ yes

☐ no

17. Name it in three letters: angle

18. What is that kind called?



Ray **OK** leaves the straight mark at **O** and cuts the flat angle in two.

19. angle MOK is

☐ acute

☐ right

☐ obtuse

20. angle KON is

☐ acute

☐ right

☐ obtuse

21. Put together, the two make one _____ angle.

22. A ray cuts a straight angle in two and one piece is acute. What must the other piece be? Say how you know.



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Compare It and Sort It

Which opening is bigger

1. *the same*. Both open 55 degrees, and the right one has arms twice as long. · 2. *right*, 75 against 40, and it is the one with the shorter arms.
3. *left*, 120 against 100. Both are obtuse, so the tester goes on both. · 4. *the same*. Two square corners, one turned 41 degrees on the page.
5. Lay one on the other, corners together and one arm on top. The second arms land together.

Put them in order

6. *a, d, b, f, c, e* 25, 62, 90, 108, 145, 180 degrees. · 7. *b*, and it sits at a tilt so it does not look like one.
8. *yes* · 9. *a straight angle*. Two arms leave the corner running opposite ways, so it is the widest opening there is.

Three arms, three angles

10. *angle ABC* 11. *angle CBD* 12. *angle ABD*. Reverse the outer letters if you like. B stays in the middle.
13. *ABC and CBD*, 52 and 66, which is the 118 of angle ABD. · 14. *angle QPR, angle RPS, angle QPS*
15. *corner R*. QRP puts R in the middle, so it names the opening at R, not the one at P.

The flat one

16. *yes* 17. *angle PQR* or angle RQP 18. *a straight angle*
19. *acute*, 55 degrees 20. *obtuse*, 125 degrees 21. *straight*, because 55 and 125 make 180.
22. *obtuse*. The two pieces make 180 together. An acute piece is under 90, so what is left is over 90 and under 180.

Mark item 1 first. Answering right there means reading the arms, and every later comparison goes wrong the same way. Item 7 is the same habit at a tilt. Hand them the folded tester.