Angles and Angle Relationships

Angle measure, angle types, and early relationships like complementary, supplementary, and vertical angles.

Name _____ Date _____

32 main 2-up grid 2 pages

Completion Reward

Shown here as a small pack artifact, not a preview destination.

1. An angle that measures 90 degrees is called what?

A. An acute angle
B. A right angle
C. An obtuse angle
D. A straight angle

2. Which measure could be an acute angle?

A. 90 degrees
B. 120 degrees
C. 35 degrees
D. 180 degrees

3. Which measure could be an obtuse angle?

A. 45 degrees
B. 90 degrees
C. 120 degrees
D. 180 degrees

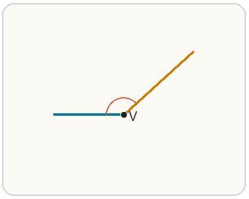
4. When two lines cross, what is true about vertical angles?

A. They add to 90
B. They add to 360
C. They are equal in measure
D. They are always acute

5. What is the measure of a straight angle?

A. 90 degrees
B. 360 degrees
C. 180 degrees
D. 45 degrees

6. What is always true about vertical angles?



When two lines intersect, the opposite angles form a vertical pair and always have equal measure.

A. They sum to 90 degrees
B. They are always acute
C. They share a side
D. They are equal in measure

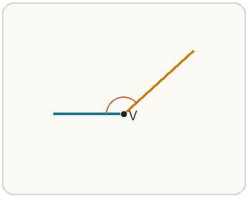
7. What do adjacent angles always share?

A. Only the same measure
B. A common vertex and a common side
C. Only the same endpoint label
D. A full rotation

8. Which measure could be an obtuse angle?

A. 100 degrees
B. 60 degrees
C. 90 degrees
D. 180 degrees

9. What is the measure of a right angle?



A right angle marks a quarter-turn, so its measure is 90 degrees.

A. 45 degrees
B. 90 degrees
C. 180 degrees
D. 360 degrees

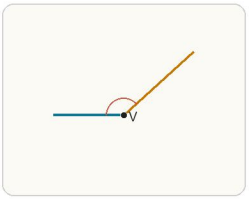
10. Angle measure describes which idea?

A. How long a segment is
B. How many sides a polygon has
C. How much one ray turns from another
D. How far a point is from the origin

11. What does an angle bisector do?

A. It makes an angle larger
B. It adds two angles together
C. It rotates an angle 90 degrees
D. It divides an angle into two equal angles

12. What geometric object is highlighted in the diagram?



The highlighted figure is an angle because two rays meet at one endpoint and create a turn.

A. A line
B. An angle
C. A segment
D. A polygon

13. **If angles A and B are complementary and angle A = 37 degrees, what is the best next step to find angle B?**

A. Add 37 to 90
B. Subtract 37 from 90
C. Subtract 37 from 180
D. Multiply 37 by 2

14. **To solve x + 37 = 90 for a pair of complementary angles, what is the best next step?**

A. Add 37 to 90
B. Subtract 37 from 90
C. Multiply 90 by 37
D. Divide 90 by 37

15. **A student says complementary angles add to 180 degrees. What is the mistake?**

A. Complementary angles are always equal
B. Complementary angles add to 90 degrees, not 180 degrees
C. Complementary angles add to 360 degrees
D. Complementary angles cannot include a right angle

16. **A student says complementary angles always add to 180 degrees. What is wrong?**

A. Complementary angles are always equal
B. Complementary angles only exist in triangles
C. Complementary angles add to 90 degrees, not 180 degrees
D. Complementary angles add to 360 degrees

17. **A student says vertical angles always add to 180 degrees. What is wrong?**

A. Vertical angles are equal; it is supplementary angles that add to 180 degrees
B. Vertical angles always add to 90 degrees
C. Vertical angles are never equal
D. Vertical angles only happen in triangles

18. **Two adjacent angles measure 18 degrees and 27 degrees. Find the whole angle. Answer with a number.**

19. **If two angles are complementary and one angle is 28 degrees, what is the other angle? Answer with a number.**

20. **If two angles are supplementary and one angle is 115 degrees, what is the other angle? Answer with a number.**

21. **If one angle measures 28 degrees and the two angles are complementary, find the other angle. Answer with a number.**

22. **If one angle measures 41 degrees and the two angles are supplementary, find the other angle. Answer with a number.**

23. **Two complementary angles measure x degrees and 37 degrees. Find x. Answer with a number.**

24. **An angle bisector splits a 74-degree angle into two equal angles. How many degrees is each smaller angle? Answer with a number.**

25. **Two adjacent angles on a straight line measure 65 degrees and x degrees. Find x. Answer with a number.**

26. **Two equal complementary angles each measure x degrees. Find x. Answer with a number.**

27. **Angle measure describes what idea?**

A. How long each side of the angle is
B. How much area the angle contains
C. How many endpoints the angle has
D. How much one ray turns away from another ray

28. **Vertical angles measure 3x - 5 degrees and 40 degrees. What is the best next step?**

A. Set 3x - 5 equal to 40
B. Add 3x - 5 and 40
C. Subtract 40 from 180
D. Multiply 40 by 2

29. **Two complementary angles measure x degrees and 54 degrees. Find x. Answer with a number.**

30. **Two angles on a straight line measure 65 degrees and x degrees. Find x. Answer with a number.**

31. **Three angles around a point measure 120 degrees, 90 degrees, and x degrees. Find x. Answer with a number.**

32. **Vertical angles measure 3x - 5 degrees and 40 degrees. Find x. Answer with a number.**