

Circles

Circle parts, central angles, arcs, tangents, and formula fluency.

Name _____ Date _____

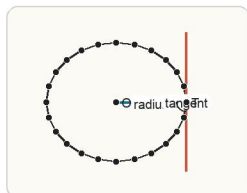
32 main 2-up grid 12 pages visible side quests

Completion Reward



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

1. How does a tangent line meet the radius drawn to the point of tangency?



A tangent touches the circle at one point, and the radius to that point is perpendicular to the tangent.

- A. Perpendicularly
- B. Parallel
- C. With equal slope
- D. It never meets it

1.3. If a radius is drawn to a tangent point, what can you conclude?

- A. the angle formed is right
- B. the angle is acute
- C. the line is a secant
- D. the radius doubles

1.1. A tangent line meets the radius at the point of tangency at:

- A. 30 degrees
- B. 45 degrees
- C. 90 degrees
- D. 180 degrees

1.2. A tangent line touches a circle in:

- A. one point
- B. two points
- C. no points
- D. the entire arc

1.4. Which description matches a tangent line?

- A. intersects the circle twice
- B. touches the circle once
- C. connects the center to the circle
- D. runs through the center

1.5. A student says a tangent crosses the circle twice. What is wrong?

- A. they described a secant instead
- B. they forgot the radius
- C. they used the wrong formula
- D. nothing

2. What is true about all radii in the same circle?

- A. They are perpendicular.
- B. They are tangents.
- C. They are congruent.
- D. They all measure 1.

2.1. If a circle has diameter 18, its radius is:

- A. 6
- B. 8
- C. 9
- D. 18

2.2. Which formula gives circumference?

- A. $2\pi r$
- B. πr^2
- C. πd^2
- D. $\frac{1}{2}\pi r$

2.3. A circle with radius 4 has area:

- A. 8π
- B. 12π
- C. 16π
- D. 32π

2.4. A central angle has its vertex at the:

- A. edge of the circle
- B. center of the circle
- C. x-intercept
- D. tangent point

2.5. A radius drawn to a tangent line at the point of tangency is:

- A. parallel to the tangent
- B. perpendicular to the tangent
- C. twice the tangent length
- D. an arc

3. What is a secant of a circle?

- A. A line that touches the circle at one point
- B. A line that intersects the circle at two points
- C. A segment from the center to the circle
- D. A chord through the center only

3.1. A chord of a circle is:

- A. a segment with endpoints on the circle
- B. a line touching once
- C. the center point
- D. an angle only

3.2. A secant intersects a circle in:

- A. one point
- B. two points
- C. no points
- D. the center only

3.3. Concentric circles share the same:

- A. diameter
- B. circumference
- C. center
- D. radius

3.4. A chord that passes through the center is called a:

- A. radius
- B. secant
- C. diameter
- D. arc

3.5. An arc is different from a chord because an arc is:

- A. a curved part of the circle
- B. always a radius
- C. a line through the center
- D. a tangent segment

4. What do concentric circles share?

- A. The same center
- B. The same radius
- C. The same tangent line
- D. The same circumference

4.1. A chord of a circle is:

- A. a segment with endpoints on the circle
- B. a line touching once
- C. the center point
- D. an angle only

4.2. A secant intersects a circle in:

- A. one point
- B. two points
- C. no points
- D. the center only

4.3. Concentric circles share the same:

- A. diameter
- B. circumference
- C. center
- D. radius

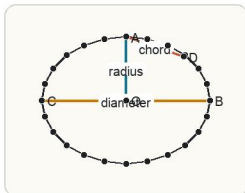
4.4. A chord that passes through the center is called a:

- A. radius
- B. secant
- C. diameter
- D. arc

4.5. An arc is different from a chord because an arc is:

- A. a curved part of the circle
- B. always a radius
- C. a line through the center
- D. a tangent segment

5. What is the difference between an arc and a chord?



An arc is a curved part of the circle itself, while a chord is a straight segment connecting two points on the circle.

- A. An arc goes through the center; a chord never does.
- B. A chord is curved and an arc is straight.
- C. An arc is curved; a chord is a straight segment with endpoints on the circle.
- D. They mean exactly the same thing.

5.1. A chord of a circle is:

- A. a segment with endpoints on the circle
- B. a line touching once
- C. the center point
- D. an angle only

5.2. A secant intersects a circle in:

- A. one point
- B. two points
- C. no points
- D. the center only

5.3. Concentric circles share the same:

- A. diameter
- B. circumference
- C. center
- D. radius

5.4. A chord that passes through the center is called a:

- A. radius
- B. secant
- C. diameter
- D. arc

5.5. An arc is different from a chord because an arc is:

- A. a curved part of the circle
- B. always a radius
- C. a line through the center
- D. a tangent segment

6. Which term names a segment with endpoints on the circle?

- A. Chord
- B. Radius
- C. Tangent
- D. Central angle

6.1. A chord of a circle is:

- A. a segment with endpoints on the circle
- B. a line touching once
- C. the center point
- D. an angle only

6.2. A secant intersects a circle in:

- A. one point
- B. two points
- C. no points
- D. the center only

6.3. Concentric circles share the same:

- A. diameter
- B. circumference
- C. center
- D. radius

6.4. A chord that passes through the center is called a:

- A. radius
- B. secant
- C. diameter
- D. arc

6.5. An arc is different from a chord because an arc is:

- A. a curved part of the circle
- B. always a radius
- C. a line through the center
- D. a tangent segment

7. Which segment in a circle is a radius?

- A. A segment with endpoints on the circle through the center
- B. A segment from the center to a point on the circle
- C. A line touching the circle once
- D. A line crossing the circle twice

7.1. A chord of a circle is:

- A. a segment with endpoints on the circle
- B. a line touching once
- C. the center point
- D. an angle only

7.2. A secant intersects a circle in:

- A. one point
- B. two points
- C. no points
- D. the center only

7.3. Concentric circles share the same:

- A. diameter
- B. circumference
- C. center
- D. radius

7.4. A chord that passes through the center is called a:

- A. radius
- B. secant
- C. diameter
- D. arc

7.5. An arc is different from a chord because an arc is:

- A. a curved part of the circle
- B. always a radius
- C. a line through the center
- D. a tangent segment

8. Which description matches a tangent line?

- A. It passes through the center.
- B. It has both endpoints on the circle.
- C. It touches the circle at exactly one point.
- D. It cuts the circle twice.

8.1. A tangent line meets the radius at the point of tangency at:

- A. 30 degrees
- B. 45 degrees
- C. 90 degrees
- D. 180 degrees

8.2. A tangent line touches a circle in:

- A. one point
- B. two points
- C. no points
- D. the entire arc

8.3. If a radius is drawn to a tangent point, what can you conclude?

- A. the angle formed is right
- B. the angle is acute
- C. the line is a secant
- D. the radius doubles

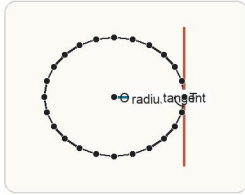
8.4. Which description matches a tangent line?

- A. intersects the circle twice
- B. touches the circle once
- C. connects the center to the circle
- D. runs through the center

8.5. A student says a tangent crosses the circle twice. What is wrong?

- A. they described a secant instead
- B. they forgot the radius
- C. they used the wrong formula
- D. nothing

9. Which labeled segment is a radius in the figure?



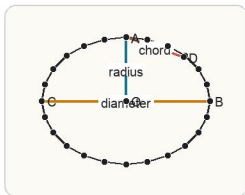
A radius runs from the center of the circle to a point on the circle.

- A. OT
- B. CT
- C. AB
- D. The tangent segment through T

9.3. Concentric circles share the same:

- A. diameter
- B. circumference
- C. center
- D. radius

10. Which segment in the figure is a diameter?



A diameter is a chord that passes through the center, so it spans the circle in a straight line through the middle.

- A. OT
- B. Top chord
- C. CB
- D. The tangent

10.3. Concentric circles share the same:

- A. diameter
- B. circumference
- C. center
- D. radius

9.1. A chord of a circle is:

- A. a segment with endpoints on the circle
- B. a line touching once
- C. the center point
- D. an angle only

9.4. A chord that passes through the center is called a:

- A. radius
- B. secant
- C. diameter
- D. arc

10.1. A chord of a circle is:

- A. a segment with endpoints on the circle
- B. a line touching once
- C. the center point
- D. an angle only

10.4. A chord that passes through the center is called a:

- A. radius
- B. secant
- C. diameter
- D. arc

9.2. A secant intersects a circle in:

- A. one point
- B. two points
- C. no points
- D. the center only

9.5. An arc is different from a chord because an arc is:

- A. a curved part of the circle
- B. always a radius
- C. a line through the center
- D. a tangent segment

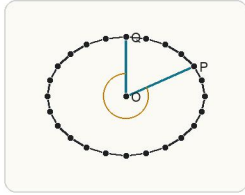
10.2. A secant intersects a circle in:

- A. one point
- B. two points
- C. no points
- D. the center only

10.5. An arc is different from a chord because an arc is:

- A. a curved part of the circle
- B. always a radius
- C. a line through the center
- D. a tangent segment

11. If the central angle shown measures 70 degrees, what is the measure of its intercepted arc?



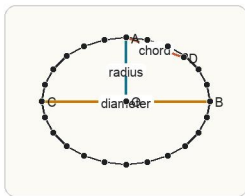
A central angle and its intercepted arc have the same measure because both are determined from the center of the circle.

- A. 35 degrees
- B. 70 degrees
- C. 140 degrees
- D. 110 degrees

11.3. If you need the measure of a minor arc, what angle is most useful to know first?

- A. a central angle
- B. a complementary angle
- C. a slope angle
- D. an exterior angle

12. Which segment in the figure is a chord but not a diameter?



A chord connects two points on the circle, but it is only a diameter when it goes through the center.

- A. CB
- B. Top chord
- C. OT
- D. The tangent

12.3. Concentric circles share the same:

- A. diameter
- B. circumference
- C. center
- D. radius

11.1. If a central angle measures 70 degrees, what is the measure of its intercepted arc?

- A. 35 degrees
- B. 70 degrees
- C. 140 degrees
- D. 290 degrees

11.4. A minor arc is usually measured in:

- A. square units
- B. degrees
- C. cubic units
- D. slopes

12.1. A chord of a circle is:

- A. a segment with endpoints on the circle
- B. a line touching once
- C. the center point
- D. an angle only

12.4. A chord that passes through the center is called a:

- A. radius
- B. secant
- C. diameter
- D. arc

11.2. A central angle measures 110 degrees. What is the measure of its intercepted minor arc?

- A. 55 degrees
- B. 70 degrees
- C. 110 degrees
- D. 250 degrees

11.5. Which statement is true?

- A. central angle measure is half the arc
- B. central angle measure equals its intercepted arc
- C. minor arcs are always 180 degrees
- D. arcs are measured in inches only

12.2. A secant intersects a circle in:

- A. one point
- B. two points
- C. no points
- D. the center only

12.5. An arc is different from a chord because an arc is:

- A. a curved part of the circle
- B. always a radius
- C. a line through the center
- D. a tangent segment

13. A radius is drawn to the point where a tangent touches the circle. What can you conclude?

- A. The radius is parallel to the tangent.
- B. The tangent is a diameter.
- C. The radius bisects every chord.
- D. The radius is perpendicular to the tangent.

13.3. If a radius is drawn to a tangent point, what can you conclude?

- A. the angle formed is right
- B. the angle is acute
- C. the line is a secant
- D. the radius doubles

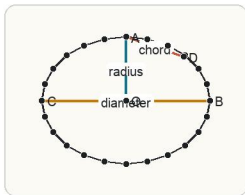
14. A chord passes through the center of a circle. What can you conclude?

- A. The chord is a diameter.
- B. The chord is a tangent.
- C. The chord is perpendicular to every radius.
- D. The chord has length equal to the radius.

14.3. Concentric circles share the same:

- A. diameter
- B. circumference
- C. center
- D. radius

15. A student says a circle with radius 5 has diameter 5. What is the mistake?



The diameter is twice the radius, so a radius of 5 gives a diameter of 10, not 5.

- A. Diameter is half the radius, so it should be 2.5.
- B. Diameter is twice the radius, so it should be 10.
- C. The diameter should be 25.
- D. Radius and diameter are always equal.

15.3. A student says a circle with radius 5 has diameter 5. What is wrong?

- A. they forgot to double the radius
- B. they should divide by 5
- C. they used area instead
- D. nothing is wrong

13.1. A tangent line meets the radius at the point of tangency at:

- A. 30 degrees
- B. 45 degrees
- C. 90 degrees
- D. 180 degrees

13.4. Which description matches a tangent line?

- A. intersects the circle twice
- B. touches the circle once
- C. connects the center to the circle
- D. runs through the center

14.1. A chord of a circle is:

- A. a segment with endpoints on the circle
- B. a line touching once
- C. the center point
- D. an angle only

14.4. A chord that passes through the center is called a:

- A. radius
- B. secant
- C. diameter
- D. arc

15.1. A circle has diameter 14. What is its radius?

- A. 5
- B. 6
- C. 7
- D. 14

15.4. Which statement is always true?

- A. diameter = radius
- B. diameter = 2 x radius
- C. radius = 2 x diameter
- D. diameter = circumference

13.2. A tangent line touches a circle in:

- A. one point
- B. two points
- C. no points
- D. the entire arc

13.5. A student says a tangent crosses the circle twice. What is wrong?

- A. they described a secant instead
- B. they forgot the radius
- C. they used the wrong formula
- D. nothing

14.2. A secant intersects a circle in:

- A. one point
- B. two points
- C. no points
- D. the center only

14.5. An arc is different from a chord because an arc is:

- A. a curved part of the circle
- B. always a radius
- C. a line through the center
- D. a tangent segment

15.2. A circle has radius 9. What is its diameter?

- A. 9
- B. 18
- C. 27
- D. 81

15.5. A bicycle wheel has radius 13 inches. What is its diameter?

- A. 13
- B. 26
- C. 39
- D. 169

16. A student says any chord is a diameter. What is the mistake?

- A. A diameter touches the circle only once.
- B. A diameter must pass through the center.
- C. A chord must be outside the circle.
- D. A diameter is always shorter than a radius.

16.3. Concentric circles share the same:

- A. diameter
- B. circumference
- C. center
- D. radius

17. A student says doubling the radius doubles the area. What is the mistake?

- A. Area depends only on the diameter.
- B. Area uses $2\pi r$.
- C. Area depends on the square of the radius.
- D. The radius should be subtracted, not doubled.

17.3. Which student is correct about circle area?

- A. Student A: area = πr^2
- B. Student B: area = $2\pi r$
- C. both
- D. neither

18. A circle has diameter 14. What is its radius? Answer with a number.

18.3. A student says a circle with radius 5 has diameter 5. What is wrong?

- A. they forgot to double the radius
- B. they should divide by 5
- C. they used area instead
- D. nothing is wrong

16.1. A chord of a circle is:

- A. a segment with endpoints on the circle
- B. a line touching once
- C. the center point
- D. an angle only

16.4. A chord that passes through the center is called a:

- A. radius
- B. secant
- C. diameter
- D. arc

17.1. What is the area of a circle with radius 3?

- A. 6π
- B. 9π
- C. 18π
- D. 3π

17.4. A student says doubling a radius only doubles the area. What is wrong?

- A. area scales with the square of the radius
- B. radius cannot double
- C. area is always linear
- D. nothing

18.1. A circle has diameter 14. What is its radius?

- A. 5
- B. 6
- C. 7
- D. 14

18.4. Which statement is always true?

- A. diameter = radius
- B. diameter = $2 \times$ radius
- C. radius = $2 \times$ diameter
- D. diameter = circumference

16.2. A secant intersects a circle in:

- A. one point
- B. two points
- C. no points
- D. the center only

16.5. An arc is different from a chord because an arc is:

- A. a curved part of the circle
- B. always a radius
- C. a line through the center
- D. a tangent segment

17.2. A circle has area 49π . What is its radius?

- A. 5
- B. 6
- C. 7
- D. 14

17.5. The phrase 'space inside a circle' points to:

- A. circumference
- B. area
- C. diameter
- D. arc measure

18.2. A circle has radius 9. What is its diameter?

- A. 9
- B. 18
- C. 27
- D. 81

18.5. A bicycle wheel has radius 13 inches. What is its diameter?

- A. 13
- B. 26
- C. 39
- D. 169

19. A circle has radius 9. What is its diameter?
Answer with a number.

19.1. A circle has diameter 14. What is its radius?

- A. 5
- B. 6
- C. 7
- D. 14

19.2. A circle has radius 9. What is its diameter?

- A. 9
- B. 18
- C. 27
- D. 81

19.3. A student says a circle with radius 5 has diameter 5. What is wrong?

- A. they forgot to double the radius
- B. they should divide by 5
- C. they used area instead
- D. nothing is wrong

19.4. Which statement is always true?

- A. diameter = radius
- B. diameter = 2 x radius
- C. radius = 2 x diameter
- D. diameter = circumference

19.5. A bicycle wheel has radius 13 inches. What is its diameter?

- A. 13
- B. 26
- C. 39
- D. 169

20. A circle has radius 7. What is its diameter?
Answer with a number.

20.1. A chord of a circle is:

- A. a segment with endpoints on the circle
- B. a line touching once
- C. the center point
- D. an angle only

20.2. A secant intersects a circle in:

- A. one point
- B. two points
- C. no points
- D. the center only

20.3. Concentric circles share the same:

- A. diameter
- B. circumference
- C. center
- D. radius

20.4. A chord that passes through the center is called a:

- A. radius
- B. secant
- C. diameter
- D. arc

20.5. An arc is different from a chord because an arc is:

- A. a curved part of the circle
- B. always a radius
- C. a line through the center
- D. a tangent segment

21. A central angle measures 110 degrees. What is the measure of its intercepted minor arc?
Answer with a number.

21.1. If a central angle measures 70 degrees, what is the measure of its intercepted arc?

- A. 35 degrees
- B. 70 degrees
- C. 140 degrees
- D. 290 degrees

21.2. A central angle measures 110 degrees. What is the measure of its intercepted minor arc?

- A. 55 degrees
- B. 70 degrees
- C. 110 degrees
- D. 250 degrees

21.3. If you need the measure of a minor arc, what angle is most useful to know first?

- A. a central angle
- B. a complementary angle
- C. a slope angle
- D. an exterior angle

21.4. A minor arc is usually measured in:

- A. square units
- B. degrees
- C. cubic units
- D. slopes

21.5. Which statement is true?

- A. central angle measure is half the arc
- B. central angle measure equals its intercepted arc
- C. minor arcs are always 180 degrees
- D. arcs are measured in inches only

22. A circle has diameter 10. What is its radius?
Answer with a number.

22.1. A chord of a circle is:

- A. a segment with endpoints on the circle
- B. a line touching once
- C. the center point
- D. an angle only

22.2. A secant intersects a circle in:

- A. one point
- B. two points
- C. no points
- D. the center only

22.3. Concentric circles share the same:

- A. diameter
- B. circumference
- C. center
- D. radius

22.4. A chord that passes through the center is called a:

- A. radius
- B. secant
- C. diameter
- D. arc

22.5. An arc is different from a chord because an arc is:

- A. a curved part of the circle
- B. always a radius
- C. a line through the center
- D. a tangent segment

23. A circle has radius 4. What is its circumference?

- A. 16π
- B. 8π
- C. 4π
- D. 32π

23.1. Which formula gives circumference?

- A. πr^2
- B. $2\pi r$
- C. Bh
- D. $\frac{1}{2}bh$

23.2. A circle has circumference 24π . What is its radius?

- A. 6
- B. 12
- C. 24
- D. 48

23.3. A circle has radius 4. What is its circumference?

- A. 4π
- B. 8π
- C. 16π
- D. 24π

23.4. A circle has diameter 12. What is its circumference?

- A. 6π
- B. 12π
- C. 24π
- D. 144π

23.5. A student uses $C = 2\pi r$ to find the space inside a circle. What is wrong?

- A. they used the circumference formula instead of the area formula
- B. they should have divided by 2
- C. circumference is always inside space
- D. nothing

24. A circle has radius 3. What is its area?

- A. 6π
- B. 3π
- C. 18π
- D. 9π

24.1. What is the area of a circle with radius 3?

- A. 6π
- B. 9π
- C. 18π
- D. 3π

24.2. A circle has area 49π . What is its radius?

- A. 5
- B. 6
- C. 7
- D. 14

24.3. Which student is correct about circle area?

- A. Student A: area = πr^2
- B. Student B: area = $2\pi r$
- C. both
- D. neither

24.4. A student says doubling a radius only doubles the area. What is wrong?

- A. area scales with the square of the radius
- B. radius cannot double
- C. area is always linear
- D. nothing

24.5. The phrase 'space inside a circle' points to:

- A. circumference
- B. area
- C. diameter
- D. arc measure

25. A circle has diameter 12. What is its circumference?

- A. 24π
- B. 12π
- C. 6π
- D. 144π

25.1. Which formula gives circumference?

- A. πr^2
- B. $2\pi r$
- C. Bh
- D. $\frac{1}{2}bh$

25.2. A circle has circumference 24π . What is its radius?

- A. 6
- B. 12
- C. 24
- D. 48

25.3. A circle has radius 4. What is its circumference?

- A. 4π
- B. 8π
- C. 16π
- D. 24π

25.4. A circle has diameter 12. What is its circumference?

- A. 6π
- B. 12π
- C. 24π
- D. 144π

25.5. A student uses $C = 2\pi r$ to find the space inside a circle. What is wrong?

- A. they used the circumference formula instead of the area formula
- B. they should have divided by 2
- C. circumference is always inside space
- D. nothing

26. Student A says the area of a circle is πr^2 . Student B says it is $2\pi r$. Who is correct?

- A. Student B
- B. Both students
- C. Neither student
- D. Student A

26.1. Which formula gives circumference?

- A. πr^2
- B. $2\pi r$
- C. Bh
- D. $\frac{1}{2}bh$

26.2. A circle has circumference 24π . What is its radius?

- A. 6
- B. 12
- C. 24
- D. 48

26.3. A circle has radius 4. What is its circumference?

- A. 4π
- B. 8π
- C. 16π
- D. 24π

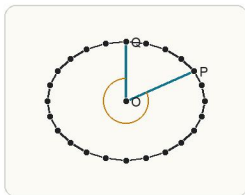
26.4. A circle has diameter 12. What is its circumference?

- A. 6π
- B. 12π
- C. 24π
- D. 144π

26.5. A student uses $C = 2\pi r$ to find the space inside a circle. What is wrong?

- A. they used the circumference formula instead of the area formula
- B. they should have divided by 2
- C. circumference is always inside space
- D. nothing

27. If you need the measure of a minor arc, what is the most useful angle to find first?



Minor arc measure is most directly read from the central angle that intercepts the same arc.

- A. Any exterior angle
- B. Its central angle
- C. A tangent angle far away
- D. The slope of a chord

27.1. If a central angle measures 70 degrees, what is the measure of its intercepted arc?

- A. 35 degrees
- B. 70 degrees
- C. 140 degrees
- D. 290 degrees

27.2. A central angle measures 110 degrees. What is the measure of its intercepted minor arc?

- A. 55 degrees
- B. 70 degrees
- C. 110 degrees
- D. 250 degrees

27.3. If you need the measure of a minor arc, what angle is most useful to know first?

- A. a central angle
- B. a complementary angle
- C. a slope angle
- D. an exterior angle

27.4. A minor arc is usually measured in:

- A. square units
- B. degrees
- C. cubic units
- D. slopes

27.5. Which statement is true?

- A. central angle measure is half the arc
- B. central angle measure equals its intercepted arc
- C. minor arcs are always 180 degrees
- D. arcs are measured in inches only

28. A student uses $C = 2\pi r$ to find the space inside a circle. What is wrong?

- A. $C = 2\pi r$ only works for semicircles.
- B. $C = 2\pi r$ finds circumference, not area; area uses $A = \pi r^2$.
- C. Area and circumference are always equal.
- D. The formula should be $C = \pi r^2$ instead.

28.1. Which formula gives circumference?

- A. πr^2
- B. $2\pi r$
- C. Bh
- D. $1/2 bh$

28.2. A circle has circumference 24π . What is its radius?

- A. 6
- B. 12
- C. 24
- D. 48

28.3. A circle has radius 4. What is its circumference?

- A. 4π
- B. 8π
- C. 16π
- D. 24π

28.4. A circle has diameter 12. What is its circumference?

- A. 6π
- B. 12π
- C. 24π
- D. 144π

28.5. A student uses $C = 2\pi r$ to find the space inside a circle. What is wrong?

- A. they used the circumference formula instead of the area formula
- B. they should have divided by 2
- C. circumference is always inside space
- D. nothing

29. A circle has circumference 24π . What is its radius? Answer with a number.

29.1. Which formula gives circumference?

- A. πr^2
- B. $2\pi r$
- C. Bh
- D. $1/2 bh$

29.2. A circle has circumference 24π . What is its radius?

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29.5. A student uses $C = 2\pi r$ to find the space inside a circle. What is wrong?

- A. they used the circumference formula instead of the area formula
- B. they should have divided by 2
- C. circumference is always inside space
- D. nothing

30. A circle has area 49π . What is its radius? Answer with a number.

30.1. What is the area of a circle with radius 3?

- A. 6π
- B. 9π
- C. 18π
- D. 3π

30.2. A circle has area 49π . What is its radius?

- A. 5
- B. 6
- C. 7
- D. 14

30.3. Which student is correct about circle area?

- A. Student A: area = πr^2
- B. Student B: area = $2\pi r$
- C. both
- D. neither

30.4. A student says doubling a radius only doubles the area. What is wrong?

- A. area scales with the square of the radius
- B. radius cannot double
- C. area is always linear
- D. nothing

30.5. The phrase 'space inside a circle' points to:

- A. circumference
- B. area
- C. diameter
- D. arc measure

31. A bicycle wheel has radius 13 inches. What is the diameter? Answer with a number.

31.1. A circle has diameter 14. What is its radius?

- A. 5
- B. 6
- C. 7
- D. 14

31.2. A circle has radius 9. What is its diameter?

- A. 9
- B. 18
- C. 27
- D. 81

31.3. A student says a circle with radius 5 has diameter 5. What is wrong?

- A. they forgot to double the radius
- B. they should divide by 5
- C. they used area instead
- D. nothing is wrong

31.4. Which statement is always true?

- A. diameter = radius
- B. diameter = 2 x radius
- C. radius = 2 x diameter
- D. diameter = circumference

31.5. A bicycle wheel has radius 13 inches. What is its diameter?

- A. 13
- B. 26
- C. 39
- D. 169

32. Which explanation is best for finding circumference from radius?

- A. Circumference measures the distance around the circle, so use $C = 2\pi r$.
- B. Circumference measures the space inside the circle, so use $A = \pi r^2$.
- C. Circumference is twice the diameter plus pi.
- D. Circumference comes from averaging the radius and diameter.

32.1. Which formula gives circumference?

- A. πr^2
- B. $2\pi r$
- C. Bh
- D. $\frac{1}{2}bh$

32.2. A circle has circumference 24π . What is its radius?

- A. 6
- B. 12
- C. 24
- D. 48

32.3. A circle has radius 4. What is its circumference?

- A. 4π
- B. 8π
- C. 16π
- D. 24π

32.4. A circle has diameter 12. What is its circumference?

- A. 6π
- B. 12π
- C. 24π
- D. 144π

32.5. A student uses $C = 2\pi r$ to find the space inside a circle. What is wrong?

- A. they used the circumference formula instead of the area formula
- B. they should have divided by 2
- C. circumference is always inside space
- D. nothing