**Geometry Test Review on Unit 8 – Circles Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

D

# *Round all decimal answers to the nearest tenth.*  Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Block\_\_\_\_

**Target 1:** I can define, identify, and use standard notation for the following: radius, diameter, chord, secant, and tangent,

major arc, minor arc, intercepted arc, central angle, inscribed angle, congruent arcs, congruent circles, concentric circles,

and common tangents.

**1-11: Given ⊙Q, give at least one example of each term using the correct notation. \****Some terms have more than one example!*

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_1.** minor arc

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2.** central angle

**A**

**B**

**D**

**C**

**Q**

•

•

•

•

•

•

**E**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_3.** major arc

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_4.** secant

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_5.**  chord

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_6.**  tangent

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_7.**  radius

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_8.** inscribed angle

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_9.** point of tangency

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_10.** diameter

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_11.** Semicircle

**Target 2:** I can relate measures of central angles to fractions of a circle and calculate circumference, arc length, and the

area of a sector.

**12-13: Find the circumference and area of each circle using the given inscribed or circumscribed polygon.**



**12. C** = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **13.** **C** = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **A** = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **A** = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**14:** Find the radius of a circle that has an area of 855.3 square millimeters.

**15-16: Find the arc length and area of each shaded sector. Round to the nearest tenth.**

**15. l** = \_\_\_\_\_\_\_\_\_\_\_\_ **16. l** = \_\_\_\_\_\_\_\_\_\_\_\_

 **A** = \_\_\_\_\_\_\_\_\_\_\_\_ **A** = \_\_\_\_\_\_\_\_\_\_\_\_

**Target 3:** I can apply properties of circles to find measures of angles or arcs formed by radii, chords, secants, and tangents

and I can apply properties of circles to find measures of radii, diameters, chords, secant segments, and tangent segments.

**17:** Given ⊙Q with tangents**,** find each measure below.

**a.** m **** = \_\_\_\_\_\_\_\_

**6**

•

**b.** m ****= \_\_\_\_\_\_\_\_

 •

**B**

**A**

**c.** m ****= \_\_\_\_\_\_\_\_

**7**

**d.** m∠1 = \_\_\_\_\_\_\_\_

•

•

**R**

• **C**

 **1**

 **F**

**e.** m∠2 = \_\_\_\_\_\_\_\_

**Q**

•

**2**

**f.** m∠ADX = \_\_\_\_\_\_\_\_

**8**

**g.** m∠FDX = \_\_\_\_\_\_\_\_

•

**E**

**h.** m∠FBR = \_\_\_\_\_\_\_\_

**3**

 **5**

•

**4**

**i.** m∠6 = \_\_\_\_\_\_\_\_

**X**

•

**D**

**j**. m∠7 = \_\_\_\_\_\_\_\_

**k.** m∠8 = \_\_\_\_\_\_\_\_

**18-21: Given ⊙Q,** **find each value. All segments that appear to be tangent are tangent.**

**18.** AB = \_\_\_\_\_\_\_\_\_ **19.** m**** = \_\_\_\_\_\_\_\_\_ **20.** Perimeter of ∆DBF= \_\_\_\_\_\_\_\_\_ **21.** x = \_\_\_\_\_\_\_\_\_

 A

 B

 C

 D

 E

Q

•

80°

81

8x + 9

•Q

E

 B

9

 7

 A

C

Q

**•**

 D

F

 13

C

•

Q

 8

D

B

A

**22-30: Find the values of x and (y and z) in each circle. Write an equation and show your work!**

**22.** x = \_\_\_\_\_\_\_ **23.** x = \_\_\_\_\_\_\_ **24.** x = \_\_\_\_\_\_\_

x°

100°

120°

 60°

120°

(4x–20)°

150°

 x°

80°

**25.** x = \_\_\_\_\_\_\_ **26.** x = \_\_\_\_\_\_\_ **27.** x = \_\_\_\_\_\_\_

140°

 80°

x°

110°

160°

30°

x°

100°

x°

**28.** x = \_\_\_\_\_\_\_ y = \_\_\_\_\_\_\_ **29.** x = \_\_\_\_\_\_\_y = \_\_\_\_\_\_\_ z = \_\_\_\_\_\_\_ **30.** x = \_\_\_\_\_\_\_y = \_\_\_\_\_\_\_

Q

•

5

60°

 x

76°

• Q

x°

y°

 y

100°

 x°

y°

 85°

 z°

70°

**31: Fill in the blanks with the correct segments to complete each formula.**

1. \_\_\_\_\_\_\_ • EC = DE • \_\_\_\_\_\_\_ **b.** \_\_\_\_\_\_\_ • AC = AE • \_\_\_\_\_\_\_ **c**. \_\_\_\_\_\_\_ = BC • \_\_\_\_\_\_\_

C

A

B

D

E

A

C

B

D

C

B

D

E

 A

**32-37: Find the values of x in each circle. Write an equation and show your work!**

**32.** x = \_\_\_\_\_\_\_ **33.** x = \_\_\_\_\_\_\_ **34.** x = \_\_\_\_\_\_\_

12

x

8

9

x

4

x

10

8

9

x

**35.** x = \_\_\_\_\_\_\_ **36.** x = \_\_\_\_\_\_\_ **37.** x = \_\_\_\_\_\_\_

9

2

x

8

3

2

x

12

x

5

10

**38-39: Tell whether AB is tangent to ☉C (Yes or No). Show Work! 40: is a tangent. Find x.**

**38.** \_\_\_\_\_\_\_\_\_\_\_ **39.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_  **40. x = \_\_\_\_\_\_\_\_\_\_**

16

20

12

B

A

**C**

C

 x

2

4

A

B

C

10

4

8

A

B

**Target 4:** I can write the equation of a circle when given the center and a radius, the center and a point on the circle, or

the endpoints of a diameter. I can also graph a circle when given the equation or the center and radius.

**41-42: Write the equation of the circle with the given information and then graph it.**

**41.** Center (-4, -6) and radius = 2 **42.** Center (0, 3) and diameter = 14

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**43-44: Find the center and the radius of the given equation and then graph it.**

**43.** (x – 2)2 + (y + 3)2 = 8 **44.** (x – 4)2 + y2 = 16

Center:\_\_\_\_\_\_\_\_\_\_\_ Radius:\_\_\_\_\_\_\_\_\_\_\_ Center:\_\_\_\_\_\_\_\_\_\_\_ Radius:\_\_\_\_\_\_\_\_\_\_\_



**45-46: Write the equation of the circle with the given information and then graph it.**

**45.** Endpoints of the diameter: (-2, -4) and (6, 2) **46.** Center is (–3, –2) and it is tangent to the *y*-axis.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_