**6.7 - Lengths with Secants, Tangents, and Chords**

*Determine the value of x.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. |  | 2. |  | 3. |  |
| 4. |  | 5. |  | 6. |  |
| 7. |  | 8. |  | 9. |  |

**Fun with Factoring!**

10. $3x^{2}+26x+16$ 11. $6x+12$ 12. $4x^{2}-15$



Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Math 3 Unit 6: Circles**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **April 10*** Arc length and area of sector

HW: worksheet 6.1 | **April 11*** Equation of a circle

HW: worksheet 6.2 | **April 12*** Inscribed angles

HW: worksheet 6.3 | **April 13*** Chords

HW: worksheet 6.4 |
| **April 16*** QUIZ!!
* Tangents

HW: worksheet 6.5 | **April 17*** Angles formed by secants, tangents, and chords

HW: worksheet 6.6 | **April 18*** Lengths formed by secants, tangents, and chords

HW: worksheet 6.7 | **April 19*** Review for test

HW: finish review | **April 20*** TEST!!!
 |

**6.1 - Arc Length and Area of a Sector**

*Find each requested measurement.*

1. radius = 7 ft, central angle = 18° 2. radius = 2 in, central angle 240°

 Find arc length. Find area of sector.

3. central angles = 130°, arc length = 14 cm 4. area of sector = 116π cm2, central angle = 110°

 Find radius. Find diameter.

5. arc length = 8π cm, radius = 20 cm 6. radius = 2 m, central angle = 103°

 Find central angle. Find arc length.

7. area of sector = 17π cm2, central angle = 75° 8. circumference = 4π in, central angle = 87°

 Find radius. Find area of sector.

9. Find area of sector. 10. Find arc length.



**Fun With Factoring!**

11. $2x^{3}+6x^{2}$ 12. $x-4$ 13. $3x^{2}+13x-10$

**6.6 - Angles Formed By Secants, Tangents, and Chords**

*Solve for x.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. |  | 2. |  | 3. |  |
| 4. |  | 5. |  | 6. |  |
| 7. |  | 8. |  | 9. |  |

**Fun With Factoring!**

10. $-3x^{2}-21x-30$ 11. $5x^{2}+45$ 12. $x^{2}+3x+2$

**6.5 - Tangents**

*Determine if line AB is tangent to the circle.*

|  |  |  |
| --- | --- | --- |
| 1. | 2. | 3. |

*Determine the perimeter of each polygon. Assume lines that appears tangent is tangent.*

|  |  |  |
| --- | --- | --- |
| 4. | 5. | 6. |

*Find the indicated side and angle measures. Assume lines that appears tangent is tangent.*

|  |  |  |
| --- | --- | --- |
| 7. | 8. | 9. |

**Fun with Factoring**

10. $25x^{2}-1$ 11. $2x^{3}+2x^{2}-4x$ 12. $2x^{2}-7x-15$

**6.2 - Equation of a Circle**

*For #1 − 4, determine the equation of a circle with the given center and radius.*

1. center: $\left(-7, 2\right)$; radius = 5 in 2. center: $\left(-5, -6\right)$; radius = 3 ft

3. center: $\left(0, 7\right)$; radius = $\sqrt{13}$ km 4. center: $\left(1, 14\right)$; radius = 36 cm

5. Find the equation of a circle with center point $\left(-1, 4\right)$and containing the point $\left(5, -4\right)$.

*For #6 − 9, determine the equation of a circle in standard form. Then determine the center and radius.*

6. $$x^{2}+y^{2}-10x+8y-56=0$$

 7. $x^{2}+y^{2}-14x+4y+35=0$

8. $$x^{2}+y^{2}-2x+6y-3=0$$

 9. $$x^{2}+y^{2}+12x-45=0$$

**Fun with Factoring**

10. $6x^{2}-5x-25$ 11. $4x^{2}-81$ 12. $3x-5$

**6.3 - Inscribed Angles**

*Find the value of each variable. For each circle, the dot represents the center.*

|  |  |  |
| --- | --- | --- |
| 1.  | 2. | 3. |
| 4. | 5. | 6.  |
| 7. | 8. | 9. |

*Find each indicated measure for M.*

10. m∠B 11. m∠C

12. $m\hat{BC}$ 13. $m\hat{AC}$

**OMG - No Fun with Factoring today!!!! You’re welcome.**

**6.4 - Chords**

*Solve for the variable.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. |  | 2. |  | 3. |  |
| 4. |  | 5. |  | 6. |  |
| 7. |  | 8. |  |  |  |

**Fun With Factoring!**

9. $7x^{2}-28$ 10. $8x^{2}+10x-7$ 11. $3x-9$