

Chapter 10 Review - Part A

1. and 2. Identify each conic section and write in standard form

$$2x^2 - y^2 - 12x + 24 = 0$$

3. and 4. Identify each conic section and write in standard form

$$5y^2 - 50y + x^2 + 30 = 0$$

5. A circle passes through (2,-4) and has its center at (5,7). Find the radius
6. Write the equation for #5
7. Write the equation of the tangent line to the circle at (0,3)

$$x^2 + y^2 = 9$$

The conjugate axis of a hyperbola is 6 units long. The vertices are (-4,0) and (6,0)

8. Center =
9. a =
10. b =
11. c =
12. Foci =
13. Equations for asymptotes
14. Equation

An ellipse has foci of (-4,0) and (4,0). The eccentricity is 2/5

15. c =
16. a =
17. b =
18. Vertices =
19. Equation

- ~~20.~~ Write the equation of the translated graph with respect to T (2,3)

$$(x-1)^2 + (y+3)^2 = 4$$

- ~~21.~~ Find the equations of the tangent and normal to the graph at ~~(1,1)~~ $(2\sqrt{2}-1, 1)$

$$x^2 + 4y^2 + 2x + 8y - 7 = 0$$

- ~~22.~~ Find the length of the tangent segment from (4,-1) to

$$(x+3)^2 + y^2 = 4$$

Chapter 10 Review - Part B

1. Graph

$$(x-2)^2 + (y+4)^2 = 25$$

2. Graph

$$\frac{(y-4)^2}{25} + \frac{(x+2)^2}{16} = 1$$

3. Center =

4. Vertices =

5. Foci =

6. Graph

$$\frac{(y-3)^2}{9} - \frac{(x+1)^2}{4} = 1$$

7. Center =

8. Vertices =

9. Foci =

10. Length of Transverse Axis =

11. Length of Conjugate Axis =

12. Equation for the Asymptotes

13. Graph

$$(x-4)^2 = -4(y+3)$$

14. Vertex =

15. Focus =

16. Directrix Line =

17. Axis of Symmetry =

18. Graph $xy = -6$

19. Graph

$$y \geq x^2 + 4$$

$$x^2 + y^2 < 49$$