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Homework Key

Parabolas

8. $x^2 = 4y$ $Focus = (0,1)$ & $Directrix\ y = -1$

9. $y^2 = -16x$ $Focus = (-4,0)$ & $Directrix\ x = 4$

10. $y^2 = x$ $Focus = \left(\frac{1}{4},0\right)$ & $Directrix\ x = \frac{-1}{4}$

11. $x^2 = 16y$ $Focus = (0,4)$ & $Directrix\ y = -4$

12. $y^2 = 8x$ $Focus = (2,0)$ & $Dirctrix\ x = -2$

13. $(2,0), x = -2$ $y^2 = 8x$

14. $(-8,0), x = 8$ $y^2 = -32x$

15. $(0,6), y = -6$ $x^2 = 24y$

16. $focus = (-4,0), Vertex = (0,0)$ $y^2 = -16x$

17. $focus = (-1,3), Directix\ is(x = 3)$ $y^2 - 6y + 8x + 1 = 0$ or $(y - 3)^2 = -8(x + 1)$

18. $focus = (2,\ 5), Directrix\ is\ (y = -1)$ $x^2 - 4x - 12y + 28 = 0$ or $(x - 2)^2 = 12(y - 2)$

19. $x^2 = 40y$

20. $x^2 = 32y$

21. $width\ at - 50cm = 73.485cm$