

4.4 Slope of a Line

1. $\frac{11-3}{4-2} = \frac{8}{2} = 4$

2. $\frac{20-1}{4-(-3)} = \frac{19}{7}$

3. $\frac{-4-2}{5-0} = \frac{-6}{5}$

4. $\frac{-6-3}{1-1} = \frac{-9}{0}$:undefined slope

5. $\frac{5-5}{10-(-3)} = \frac{0}{13} = 0$

6. $\frac{-1-4}{11-1} = \frac{-5}{10} = -\frac{1}{2}$

7. $\frac{212-32}{100-0} = \frac{180}{100} = \frac{9}{5}$

8. $\frac{18-4}{-1-6} = \frac{14}{-7} = -2$

9. $x = 5$

10. $y = 12$

11. $y = 4$

12. $y = -3x + 5$, so $m = -3$, y-axis int. is $(0,5)$

13. $y = 2x - \frac{9}{2}$, so $m = 2$, y-axis int. is $\left(0, -\frac{9}{2}\right)$

14. $y = \frac{5}{3}x + \frac{122}{3}$, so $m = \frac{5}{3}$, y-axis int. is $\left(0, \frac{122}{3}\right)$

15. $m = 0$, y-axis int. is $(0,-2)$

16. slope undefined, no y-axis int.

17. $y = \frac{3}{2}x - 4$, so $m = \frac{3}{2}$, y-axis int. is $(0,-4)$

18. $m_{\perp} = \frac{-1}{5}$

19. $m_{\perp} = \frac{5}{3}$

20. $m_{\perp} = \frac{1}{3}$

21. $m_{\perp} = \frac{8}{3}$

22. $m_{\perp} = 0$

23. $m_{\perp}$ is undefined