

Desmos Practice

Name _____

For Desmos, we will type in Virginia Desmos Graphing Calculator into Google.

Calculate the following using just Desmos and put your answer in the blank.

_____ 1. $|-9 + 4^2|$ _____ 2. $\sqrt[3]{1331}$ _____ 3. $\sqrt{|14^3 - 5^5| - 381}$

Use sliders to get your answer on these problems and put your answers in the blank.

_____ 4. $\frac{(a+b)^2}{b^2}$ when $a = 10$ and $b = 2$ _____ 5. $\frac{-16ab}{b^3}$ when $a = 4$ and $b = -2$

_____ 6. $\frac{\sqrt[4]{a^{16}b^2}}{ab^2}$ when $a = 2$ and $b = 4$ _____ 7. $|4a^2|$ when $a = -4$

_____ 8. What are the real roots of $2x^2 + 2x - 12 = 0$?

_____ 9. What are the real roots of $x^2 - 9x - 10 = 0$?

_____ 10. What are the real roots of $3x^2 - 12 = 0$?

_____ 11. What are the real roots of $x^2 - 7x + 12 = 0$?

_____ 12. Use Desmos to solve this equation: $-4x + 18 = 2(x - 6)$

_____ 13. When you graph the line $x = 5$, is it a horizontal or vertical line?

_____ 14. When you graph the line $y = -4$, is it a horizontal or vertical line?

_____ 15. Graph $x = 3$ and graph the point $(2, 3)$. Does the line go through the point?

_____ 16. Graph $2x + 3y = 6$ and graph the points $(2, 0)$ and $(0, 3)$.
Does the line go through either of these points?

_____ 17. Graph $3x - y = 5$. Which of the points below does it go through?
A. $(5, 9)$ B. $(-3, -14)$ C. $(0, -5)$ D. $(1, -8)$

_____ 18. Graph $3x + 4y = -3$ and determine the slope of the line.

Plot the data in a TABLE in Desmos and then graph each of the equations to determine which equation represents the data.

- _____ 19. $\{(2, -5) (-3, 5) (-4, 7)\}$
 A. $y = 4x - 1$ B. $y = -2x - 1$ C. $x - y = -3$
- _____ 20. $\{(\frac{1}{2}, 4) (1, 2) (-2, -1)\}$
 A. $y = -2x$ B. $y = \frac{1}{2}x$ C. $y = \frac{2}{x}$
- _____ 21. $\{4, -12) (-1, 3) (-2, 6)\}$
 A. $y = 3x$ B. $y = -3x$ C. $y = 3 - x$
- _____ 22. $\{2, 5) (-1, -1) (0, -1) (1, 1)\}$
 A. $y = x^2 - x - 1$ B. $y = x^2 + x - 1$ C. $y = x^2 + x + 1$

Using lines of best fit – Use either $y_1 \sim mx_1 + b$ OR $y_1 \sim ax_1^2 + bx_1 + c$

- _____ 23. After dropping an object from 500 feet, here are the heights recorded every second. What will its height be at 4 seconds?

_____ 12. Put these points in a table and decide which equation

Using Desmos, go plot this points in a table and then give the equation of best fit.

Round each value to the nearest tenth.

- _____ 7. $\{(2, 3.2) (4, 7.1) (-2, -4.9) (1.5, 1.9) (-4, -8.8) (-3, -7)\}$
- _____ 8. $\{(-3, 4.4) (-1, 3.6) (0, 3.1) (2.5, 1.9) (3, 1.5) (.5, 2.7) (5, .4)\}$
- _____ 9. $\{(1, -5) (3, -1.1) (1.5, -4.7) (-3, 11.2) (-2, 4.3) (0, -3.8) (4, 4.2)\}$
- _____ 10. $\{(-5, 51) (-4, 34) (-3, 21) (-1, 4) (1, 1) (2, 5) (3, 12) (5, 36)\}$
- _____ 11. $\{(-8, 22) (-6, 17) (-4, 13) (-1, 4.6) (2, -3.2) (6, -13.4) (9, -21)\}$
- _____ 12. $\{(-5, -84) (-3, -33) (-2, -15) (1, -1) (3, -20) (6, -96) (7, -134)\}$

