

Answers

1	Find the distance between $(-2, -4)$ and $(1, -5)$.	$\sqrt{10}$
2	Find the midpoint between points $(3, -5)$ and $(2, 7)$.	$(\frac{5}{2}, 1)$
3	Find the x and y intercepts of $y = x^2 - 5x - 14$.	$(7, 0), (-2, 0), (0, -14)$
4	Test for symmetries: $y = \frac{2x-x^3}{x+x^5}$	y-axis
5	Find the center and radius: $x^2 + y^2 - 10x + 2y + 1 = 0$	$C(5, -1), r=5$
6	Find the equation of the line through $(-2, 4)$ and $(-1, 7)$.	$y = 3x + 10$
7	Find the equation of the line parallel to the y-axis and through $(2, 5)$.	$x = 2$
8	Find the equation of the line perpendicular to the x-axis and through $(7, 8)$.	$x = 7$
9	Find the x and y intercepts of $2x + 3y = 7$.	$(\frac{7}{2}, 0), (0, \frac{7}{3})$
10	Find the slope of the line that is parallel to $3x - 2y = 7$.	$m = \frac{3}{2}$
11	Find the slope of the line that is perpendicular to $7x + 5y = 2$.	$m = \frac{5}{7}$
12	Does $y^2 + 2x = 7$ define y as a function of x?	No
13	For $f(x) = 7 - 2x$, find $f(3x - 2)$.	$11 - 6x$
14	Find the domain of A) $f(x) = \frac{x-3}{x^2-5x-14}$ B) $f(x) = \frac{x-2}{\sqrt{x-5}}$	A) $x \neq 7, -2$ B) $x > 5$
15	Is point $(-3, 4)$ on the graph of $x^2 + y^2 = 25$?	Yes
16	Find all the x and y intercepts of $f(x) = x^3 - 9x = x(x^2 - 9)$	$x = 0, 3, -3 ; y = 0$
17	Find all x such that $(x, 6)$ is a point on the graph of $f(x) = x^2 + x$. $6 = x^2 + x \quad x^2 + x - 6 = 0$	$x = -3, 2$
18	Is the function even, odd or neither? A) $f(x) = \frac{x^3+5x}{x-x^5}$ B) $f(x) = \frac{x^2+5}{x^3-x}$	A) EVEN ; B) ODD
19	Find the average rate of change of $f(x) = 3 - x^2$ from $x = 0$ to $x = 2$.	-2
20	For $f(x) = 2x - x^2$, find $\frac{f(3+h)-f(3)}{h}$ and simplify.	$-4-h$
21	For $f(x) = \begin{cases} 3, & x \leq 2 \\ -x + 5, & x > 2 \end{cases}$ Find $f(-10), f(2), f(7)$. Draw the graph.	$f(-10) = 3 ; f(2) = 3 ; f(7) = -2$
22	Graph $f(x) = (x+1)^2 - 4$. Find the x and y intercepts.	$x = 1, -3 ; y = -3 ;$ see video for graph
23	What equation is the result of the following transformations of $y = \sqrt{x}$? <ul style="list-style-type: none"> • Reflect through y-axis • Shift left 3 • Shift up 10 • Reflect through the x-axis 	$-\sqrt{-x-3} - 10$
24	Show that the following transformations of $y = \sqrt{x}$ result in $y = -\sqrt{-x+3} - 10$. <ul style="list-style-type: none"> • Reflect through y-axis • Shift right 3 • Shift up 10 • Reflect through x-axis 	see video #3