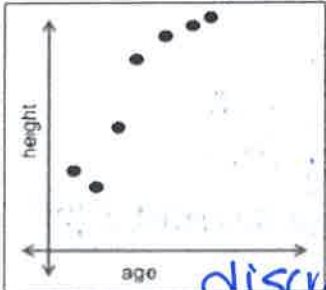
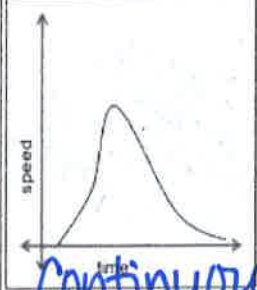
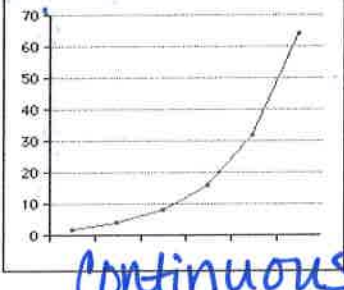


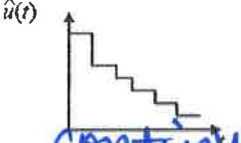
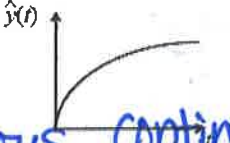
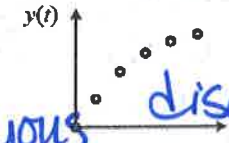
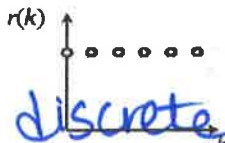
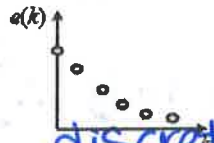
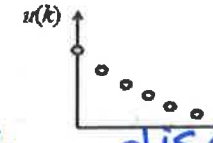
Identify each as discrete or continuous.

Name Key

Practice 2

<p>Tickets to a concert cost \$20 each.</p> <p style="font-size: 2em; color: blue;">Discrete</p> <p>Discrete or Continuous?</p>	<p>Save Mart sells bananas for \$1.19 per pound.</p> <p style="font-size: 1.5em; color: blue;">continuous (could get any weight)</p> <p>Discrete or Continuous?</p>	<p>The volume of water in a swimming pool steadily decreases at a rate of 15 gallons per minute.</p> <p style="font-size: 1.5em; color: blue;">continuous</p> <p>Discrete or Continuous?</p>
 <p style="color: blue; font-size: 1.5em;">discrete</p>	 <p style="color: blue; font-size: 1.5em;">Continuous</p>	 <p style="color: blue; font-size: 1.5em;">continuous</p>

Identify each of the graphs as discrete or continuous.

 <p style="color: blue; font-size: 1.5em;">continuous</p>	 <p style="color: blue; font-size: 1.5em;">continuous</p>	 <p style="color: blue; font-size: 1.5em;">discrete</p>
 <p style="color: blue; font-size: 1.5em;">discrete</p>	 <p style="color: blue; font-size: 1.5em;">discrete</p>	 <p style="color: blue; font-size: 1.5em;">discrete</p>

Write the missing part for each situation.

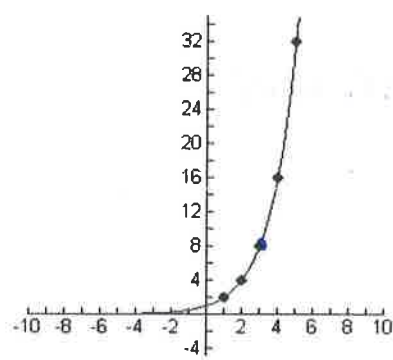
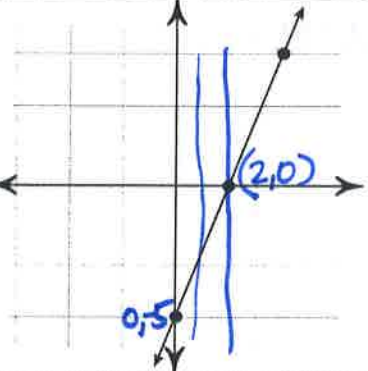
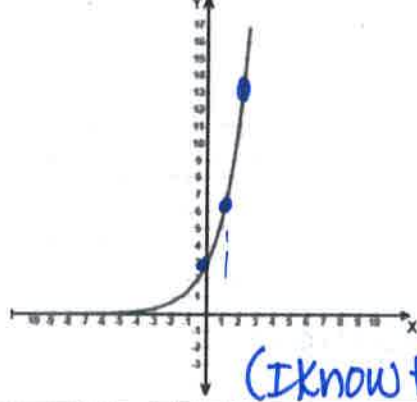
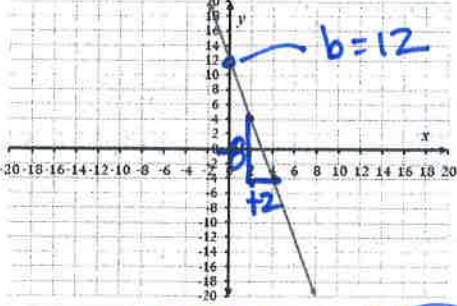
Verbal Description	Explicit Function	Recursive Function
The first term is 19 and you subtract 8 for each term. 19, 11, 3...	$f(n) = 19 - 8(n-1)$	$f(1) = 19$ $f(n) = f(n-1) - 8$
First term is 4 and you multiply by 2 each term.	$f(n) = 4(2)^{n-1}$	$f(1) = 4$ $f(n) = f(n-1) * 2$
First term is 100 and you multiply by $\frac{1}{2}$ each term.	$f(n) = 100(\frac{1}{2})^{n-1}$	$f(1) = 100$ $f(n) = f(n-1) * \frac{1}{2}$
The fourth term is 56 and the pattern doubles with each step.	$f(n) = 7(2)^{n-1}$ OR $f(n) = 56(2)^{n-4}$	$f(4) = 56$ $f(n) = f(n-1) * 2$
The first term is 83 and you add 9 with each step.	$f(n) = 83 + 9(n-1)$	$f(1) = 83$ $f(n) = f(n-1) + 9$
First term is -16 and you subtract 14 with each step.	$f(n) = -16 - 14(n-1)$	$f(1) = -16$ $f(n) = f(n-1) - 14$

OR $f(1) = 7$
 $f(n) = f(n-1) * 2$

1	2	3	4
7	14	28	56

Write the equation for the function shown.

Key

	Linear or Exponential?	Equation for the function										
	<p>Exponential</p> <table border="1" data-bbox="592 388 803 630"> <tr><th>x</th><th>f(x)</th></tr> <tr><td>1</td><td>2</td></tr> <tr><td>2</td><td>4</td></tr> <tr><td>3</td><td>8</td></tr> <tr><td>4</td><td>16</td></tr> </table> <p>I always recommend making a table to see the pattern</p>	x	f(x)	1	2	2	4	3	8	4	16	<p>$f(x) = 2(2)^{x-1}$ OR $f(x) = 1(2)^x$</p> <p>starting point at $x=0$</p>
x	f(x)											
1	2											
2	4											
3	8											
4	16											
	<p>Linear</p> <table border="1" data-bbox="576 787 706 1008"> <tr><th>x</th><th>y</th></tr> <tr><td>0</td><td>-5</td></tr> <tr><td>2</td><td>0</td></tr> <tr><td>4</td><td>5</td></tr> </table> <p>$m = \frac{-5-0}{0-2} = \frac{-5}{-2} = \frac{5}{2}$ $b = -5$ (y-intercept)</p>	x	y	0	-5	2	0	4	5	<p>$y = \frac{5}{2}x - 5$</p>		
x	y											
0	-5											
2	0											
4	5											
 <p>(I know this is hard to read!)</p>	<p>Exponential</p> <table border="1" data-bbox="584 1155 860 1375"> <tr><th>x</th><th>f(x)</th></tr> <tr><td>0</td><td>3</td></tr> <tr><td>1</td><td>6</td></tr> <tr><td>2</td><td>12</td></tr> </table> <p>$\times 2$ $\times 2$</p>	x	f(x)	0	3	1	6	2	12	<p>$f(x) = 6(2)^{x-1}$ OR $f(x) = 3(2)^x$</p>		
x	f(x)											
0	3											
1	6											
2	12											
 <p>$b = 12$</p>	<p>Linear</p> <p>$\frac{-8}{2} = -4 = m$</p> <p>$y = -4x + 12$</p>	<p>$y = -4x + 12$</p>										

Write an equation to represent the situation:

You are saving money for a summer trip. You have \$80 already saved, but plan to add \$15 per week to your savings.

Write an equation showing the amount of money, M, you have saved after w weeks.

$M = 80 + 15w$

↳ money started ↳ money per week

weeks