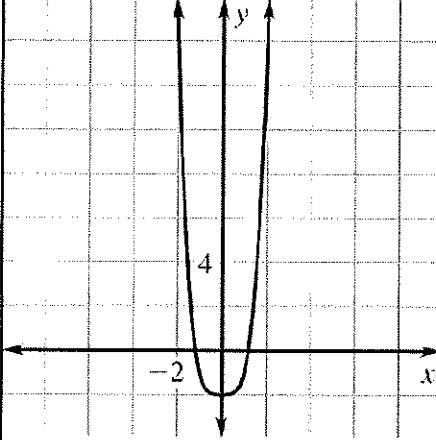
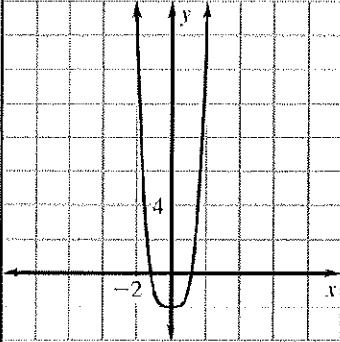
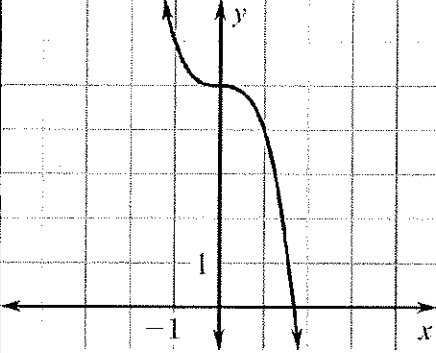
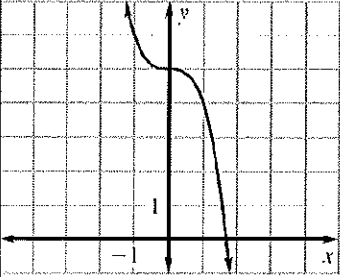
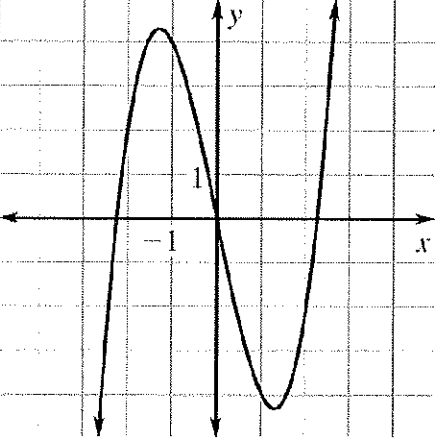
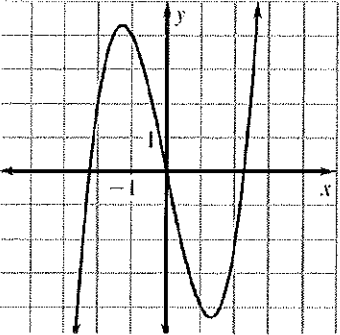
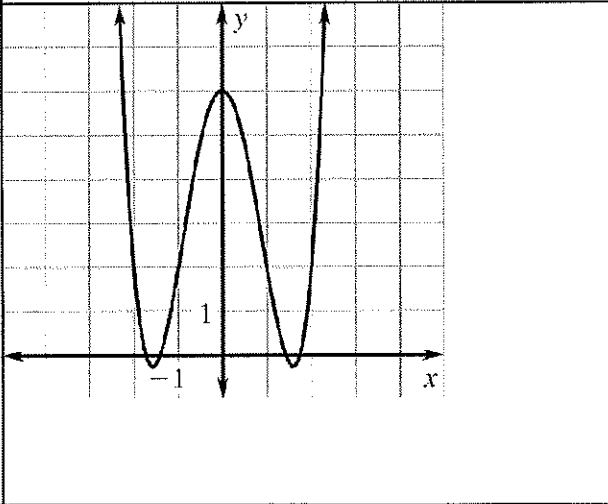
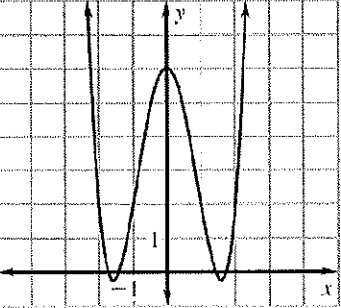
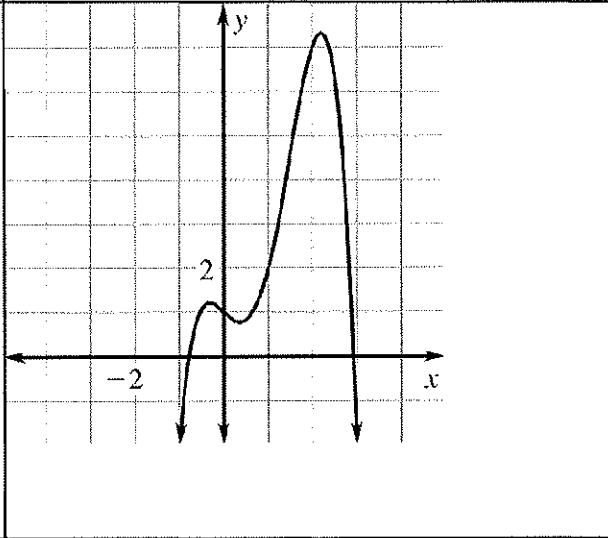
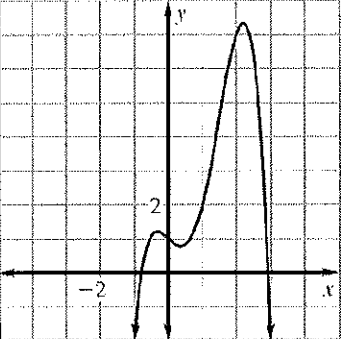
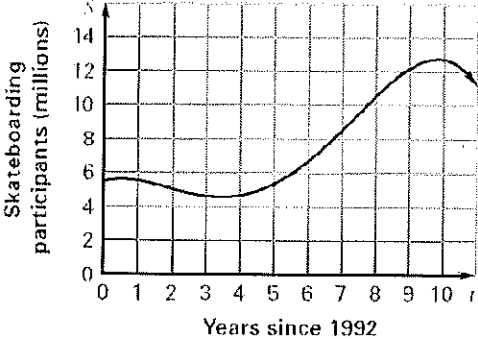
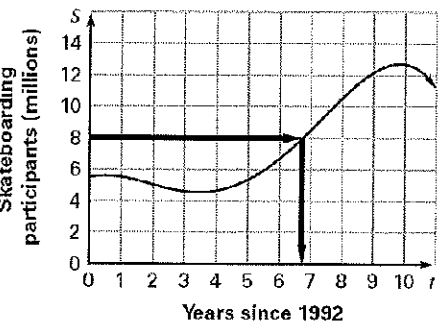


Question	Answer	Solution															
4.	polynomial function; $f(x) = 8x^4 + 6x - 3$ , degree: 4, type: quartic, leading coefficient: 8	The function is a polynomial function written as $f(x) = 8x^4 + 6x - 3$ in standard form. It has a degree 4 (quartic) and a leading coefficient of 8.															
5.	polynomial function; $g(x) = \pi x^4 + \sqrt{6}$ , degree: 4, type: quartic, leading coefficient: $\pi$	The function is a polynomial that is already written in standard form. It has degree 4 (quartic) and a leading coefficient of $\pi$ .															
6.	not a polynomial function	The function is not a polynomial function because the term $5x^{-2}$ has an exponent that is not a whole number.															
7.	polynomial function; $h(x) = -\frac{5}{2}x^3 + 3x - 10$ , degree: 3, type: cubic, leading coefficient: $-\frac{5}{2}$	The function is a polynomial function already written in standard form. It has degree 3 (cubic) and a leading coefficient of $-\frac{5}{2}$ .															
8.	not a polynomial function	The function is not a polynomial function because the term $\frac{2}{x}$ has an exponent that is not a whole number.															
9.	-32	$f(x) = 5x^3 - 2x^2 + 10x - 15$ $f(-1) = 5(-1)^3 - 2(-1)^2 + 10(-1) - 15$ $= -5 - 2 - 10 - 15$ $= -32$															
11.	378	$g(x) = -2x^5 + 4x^3$ $g(-3) = -2(-3)^5 + 4(-3)^3 = 486 - 108 = 378$															
13.	182	$h(x) = \frac{1}{2}x^4 - \frac{3}{4}x^3 + x + 10$ $h(-4) = \frac{1}{2}(-4)^4 - \frac{3}{4}(-4)^3 + (-4) + 10$ $= 128 + 48 - 4 + 10$ $= 182$															
15.	109	<table style="border-collapse: collapse; margin-left: 20px;"> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">3</td> <td style="padding: 0 10px;">5</td> <td style="padding: 0 10px;">-2</td> <td style="padding: 0 10px;">-8</td> <td style="padding: 0 10px;">16</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding: 0 10px;"></td> <td style="padding: 0 10px;">15</td> <td style="padding: 0 10px;">39</td> <td style="padding: 0 10px;">93</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;"></td> <td style="padding: 0 10px;">5</td> <td style="padding: 0 10px;">13</td> <td style="padding: 0 10px;">31</td> <td style="padding: 0 10px;">109</td> </tr> </table> $f(3) = 109$	3	5	-2	-8	16			15	39	93		5	13	31	109
3	5	-2	-8	16													
		15	39	93													
	5	13	31	109													

Question	Answer	Solution
17.	149	$  \begin{array}{r}  -6 \quad   \quad 1 \quad 8 \quad -7 \quad 35 \\  \quad \quad   \quad \quad -6 \quad -12 \quad 114 \\  \hline  \quad \quad   \quad 1 \quad 2 \quad -19 \quad 149 \\  f(-6) = 149  \end{array}  $
19.	-11	$  \begin{array}{r}  2 \quad   \quad -2 \quad 3 \quad 0 \quad -8 \quad 13 \\  \quad \quad   \quad \quad -4 \quad -2 \quad -4 \quad -24 \\  \hline  \quad \quad   \quad -2 \quad -1 \quad -2 \quad -12 \quad -11 \\  f(2) = -11  \end{array}  $
25.	degree: even, leading coefficient: positive	The degree is even and the leading coefficient is positive.
26.	degree: odd, leading coefficient: negative	The degree is odd and the leading coefficient is negative.
27.	degree: even, leading coefficient: negative	The degree is even and the leading coefficient is negative.
28.	$+\infty, +\infty$	$f(x) \rightarrow +\infty$ as $x \rightarrow -\infty$ $f(x) \rightarrow +\infty$ as $x \rightarrow +\infty$
29.	$-\infty, -\infty$	$f(x) \rightarrow -\infty$ as $x \rightarrow -\infty$ $f(x) \rightarrow -\infty$ as $x \rightarrow +\infty$
30.	$+\infty, -\infty$	$f(x) \rightarrow +\infty$ as $x \rightarrow -\infty$ $f(x) \rightarrow -\infty$ as $x \rightarrow +\infty$
31.	$-\infty, +\infty$	$f(x) \rightarrow -\infty$ as $x \rightarrow -\infty$ $f(x) \rightarrow +\infty$ as $x \rightarrow +\infty$

Question	Answer	Solution																
41.		<table border="1" data-bbox="915 203 1479 338"> <tr> <td><math>x</math></td> <td>-3</td> <td>-2</td> <td>-1</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td><math>y</math></td> <td>79</td> <td>14</td> <td>-1</td> <td>-2</td> <td>-1</td> <td>14</td> <td>79</td> </tr> </table> 	$x$	-3	-2	-1	0	1	2	3	$y$	79	14	-1	-2	-1	14	79
$x$	-3	-2	-1	0	1	2	3											
$y$	79	14	-1	-2	-1	14	79											
42.		<table border="1" data-bbox="915 737 1463 871"> <tr> <td><math>x</math></td> <td>-3</td> <td>-2</td> <td>-1</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td><math>y</math></td> <td>32</td> <td>13</td> <td>6</td> <td>5</td> <td>4</td> <td>-3</td> <td>-22</td> </tr> </table> 	$x$	-3	-2	-1	0	1	2	3	$y$	32	13	6	5	4	-3	-22
$x$	-3	-2	-1	0	1	2	3											
$y$	32	13	6	5	4	-3	-22											
43.		<table border="1" data-bbox="915 1205 1474 1339"> <tr> <td><math>x</math></td> <td>-3</td> <td>-2</td> <td>-1</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td><math>y</math></td> <td>-12</td> <td>2</td> <td>4</td> <td>0</td> <td>-4</td> <td>-2</td> <td>12</td> </tr> </table> 	$x$	-3	-2	-1	0	1	2	3	$y$	-12	2	4	0	-4	-2	12
$x$	-3	-2	-1	0	1	2	3											
$y$	-12	2	4	0	-4	-2	12											

Question	Answer	Solution																
48.		<table border="1" data-bbox="930 205 1425 342"> <tr> <td><b>x</b></td> <td>-3</td> <td>-2</td> <td>-1</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td><b>y</b></td> <td>42</td> <td>2</td> <td>2</td> <td>6</td> <td>2</td> <td>2</td> <td>42</td> </tr> </table> 	<b>x</b>	-3	-2	-1	0	1	2	3	<b>y</b>	42	2	2	6	2	2	42
<b>x</b>	-3	-2	-1	0	1	2	3											
<b>y</b>	42	2	2	6	2	2	42											
49.		<table border="1" data-bbox="930 705 1479 842"> <tr> <td><b>x</b></td> <td>-3</td> <td>-2</td> <td>-1</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td><b>y</b></td> <td>-158</td> <td>-37</td> <td>-2</td> <td>1</td> <td>2</td> <td>7</td> <td>-2</td> </tr> </table> 	<b>x</b>	-3	-2	-1	0	1	2	3	<b>y</b>	-158	-37	-2	1	2	7	-2
<b>x</b>	-3	-2	-1	0	1	2	3											
<b>y</b>	-158	-37	-2	1	2	7	-2											

Question	Answer	Solution																																																														
54.	about 11 carats	$w = 0.00071d^3 - 0.090d^2 + 0.48d$ $w = 0.0071(15)^3 - 0.090(15)^2 + 0.48(15)$ $= 23.9625 - 20.25 + 7.2$ $= 10.9125 \text{ carats}$																																																														
55.	 <p>1998</p>	<table border="1" data-bbox="917 535 1323 661"> <tr> <td><math>t</math></td> <td>0</td> <td>2</td> <td>4</td> <td>6</td> <td>8</td> </tr> <tr> <td><math>S</math></td> <td>5.5</td> <td>5.1</td> <td>4.7</td> <td>6.7</td> <td>10.5</td> </tr> </table>  <p>There were 8 million skateboarders 6 years after 1992 (1998).</p>	$t$	0	2	4	6	8	$S$	5.5	5.1	4.7	6.7	10.5																																																		
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56a.	3, cubic	The function is degree 3 (cubic).																																																														
56b.	<table border="1" data-bbox="311 1207 904 1444"> <tr> <td><math>t</math></td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td><math>M</math></td> <td>21,600</td> <td>21,264</td> <td>21,396</td> <td>21,930</td> <td>22,800</td> <td>23,940</td> </tr> <tr> <td><math>t</math></td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> </tr> <tr> <td><math>M</math></td> <td>25,284</td> <td>26,766</td> <td>28,320</td> <td>29,880</td> <td>31,380</td> <td>32,754</td> </tr> <tr> <td><math>t</math></td> <td>12</td> <td>13</td> <td>14</td> <td>15</td> <td>16</td> </tr> <tr> <td><math>M</math></td> <td>33,936</td> <td>34,860</td> <td>35,460</td> <td>35,670</td> <td>35,424</td> </tr> </table>	$t$	0	1	2	3	4	5	$M$	21,600	21,264	21,396	21,930	22,800	23,940	$t$	6	7	8	9	10	11	$M$	25,284	26,766	28,320	29,880	31,380	32,754	$t$	12	13	14	15	16	$M$	33,936	34,860	35,460	35,670	35,424	<table border="1" data-bbox="917 1207 1500 1480"> <tr> <td><math>t</math></td> <td>0</td> <td>2</td> <td>4</td> <td>6</td> <td>8</td> </tr> <tr> <td><math>M</math></td> <td>21,600</td> <td>21,396</td> <td>22,800</td> <td>25,284</td> <td>28,320</td> </tr> <tr> <td><math>t</math></td> <td>10</td> <td>12</td> <td>14</td> <td>16</td> </tr> <tr> <td><math>M</math></td> <td>31,380</td> <td>33,936</td> <td>35,460</td> <td>35,424</td> </tr> </table>	$t$	0	2	4	6	8	$M$	21,600	21,396	22,800	25,284	28,320	$t$	10	12	14	16	$M$	31,380	33,936	35,460	35,424
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56c.	