



Function Root Behaviour (Polynomials) - Roots and Multiplicity to Behaviour

<p>1</p> <p>What x-intercept behaviour would these roots and multiplicities create?</p> <p>$x = -3$ (multiplicity 3) $x = -1$ (multiplicity 3)</p>	<p>2</p> <p>What x-intercept behaviour would these roots and multiplicities create?</p> <p>$x = 0$ (multiplicity 3) $x = 3$ (multiplicity 2)</p>		
<p>A at $x = -1$: crosses the x-axis and flattens at $x = 3$: crosses the x-axis and flattens</p>	<p>B at $x = -3$: crosses the x-axis and flattens at $x = -1$: crosses the x-axis and flattens</p>	<p>A at $x = -3$: touches the x-axis without crossing at $x = 0$: crosses the x-axis and flattens</p>	<p>B at $x = 0$: crosses the x-axis and flattens at $x = 3$: crosses the x-axis and flattens</p>
<p>C at $x = -3$: touches the x-axis without crossing and flattens at $x = -1$: crosses the x-axis and flattens</p>	<p>D at $x = -3$: crosses the x-axis and flattens at $x = 1$: crosses the x-axis and flattens</p>	<p>C at $x = 0$: touches the x-axis without crossing at $x = 3$: crosses the x-axis and flattens</p>	<p>D at $x = 2$: crosses the x-axis and flattens at $x = 3$: crosses the x-axis</p>
<p>E at $x = 1$: crosses the x-axis and flattens at $x = 3$: crosses the x-axis and flattens</p>		<p>E at $x = 0$: crosses the x-axis and flattens at $x = 3$: touches the x-axis without crossing</p>	
<p>3</p> <p>What x-intercept behaviour would these roots and multiplicities create?</p> <p>$x = -2$ (multiplicity 3) $x = 2$ (multiplicity 4)</p>	<p>4</p> <p>What x-intercept behaviour would these roots and multiplicities create?</p> <p>$x = -3$ (multiplicity 2) $x = 0$ (multiplicity 4)</p>		
<p>A at $x = -2$: touches the x-axis without crossing and flattens at $x = 2$: touches the x-axis without crossing and flattens</p>	<p>B at $x = -2$: crosses the x-axis and flattens at $x = 2$: crosses the x-axis and flattens</p>	<p>A at $x = -3$: touches the x-axis without crossing and flattens at $x = 0$: touches the x-axis without crossing</p>	<p>B at $x = -3$: touches the x-axis without crossing at $x = 0$: touches the x-axis without crossing and flattens</p>
<p>C at $x = -2$: crosses the x-axis and flattens at $x = 2$: touches the x-axis without crossing and flattens</p>	<p>D at $x = 3$: crosses the x-axis at $x = 4$: touches the x-axis without crossing</p>	<p>C at $x = 2$: crosses the x-axis at $x = 4$: crosses the x-axis</p>	<p>D at $x = 0$: touches the x-axis without crossing and flattens at $x = 3$: touches the x-axis without crossing</p>
<p>E at $x = -2$: touches the x-axis without crossing and flattens at $x = 2$: crosses the x-axis and flattens</p>		<p>E at $x = -3$: touches the x-axis without crossing at $x = -1$: touches the x-axis without crossing and flattens</p>	
<p>5</p> <p>What x-intercept behaviour would these roots and multiplicities create?</p> <p>$x = -2$ (multiplicity 2) $x = 1$ (multiplicity 3)</p>	<p>6</p> <p>What x-intercept behaviour would these roots and multiplicities create?</p> <p>$x = -3$ (multiplicity 2) $x = 3$ (multiplicity 2)</p>		
<p>A at $x = -2$: touches the x-axis without crossing at $x = 1$: crosses the x-axis and flattens</p>	<p>B at $x = 2$: crosses the x-axis at $x = 3$: crosses the x-axis</p>	<p>A at $x = -3$: touches the x-axis without crossing at $x = 3$: crosses the x-axis</p>	<p>B at $x = -3$: touches the x-axis without crossing at $x = 3$: crosses the x-axis and flattens</p>
<p>C at $x = -3$: touches the x-axis without crossing at $x = 1$: crosses the x-axis and flattens</p>	<p>D at $x = -2$: crosses the x-axis and flattens at $x = 1$: touches the x-axis without crossing</p>	<p>C at $x = -3$: crosses the x-axis and flattens at $x = 3$: touches the x-axis without crossing</p>	<p>D at $x = -3$: touches the x-axis without crossing at $x = 3$: touches the x-axis without crossing</p>
<p>E at $x = -1$: crosses the x-axis and flattens at $x = 2$: touches the x-axis without crossing</p>			
<p>7</p> <p>What x-intercept behaviour would these roots and multiplicities create?</p> <p>$x = -1$ (multiplicity 3) $x = 3$ (multiplicity 2)</p>	<p>8</p> <p>What x-intercept behaviour would these roots and multiplicities create?</p> <p>$x = -3$ (multiplicity 1) $x = -2$ (multiplicity 2)</p>		
<p>A at $x = -3$: touches the x-axis without crossing at $x = 1$: crosses the x-axis and flattens</p>	<p>B at $x = -1$: crosses the x-axis and flattens at $x = 3$: touches the x-axis without crossing</p>	<p>A at $x = -3$: crosses the x-axis at $x = -2$: crosses the x-axis and flattens</p>	<p>B at $x = 1$: crosses the x-axis at $x = 2$: crosses the x-axis</p>
<p>C at $x = -1$: touches the x-axis without crossing at $x = 3$: crosses the x-axis and flattens</p>	<p>D at $x = -1$: touches the x-axis without crossing and flattens at $x = 3$: touches the x-axis without crossing</p>	<p>C at $x = 2$: touches the x-axis without crossing at $x = 3$: crosses the x-axis</p>	<p>D at $x = -3$: touches the x-axis without crossing at $x = -2$: crosses the x-axis</p>
<p>E at $x = 2$: crosses the x-axis and flattens at $x = 3$: crosses the x-axis</p>		<p>E at $x = -3$: crosses the x-axis at $x = -2$: touches the x-axis without crossing</p>	