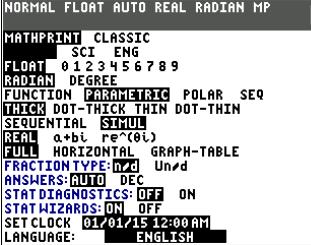
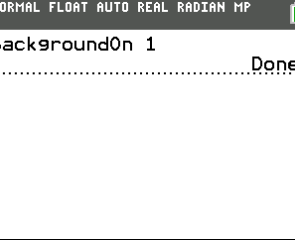

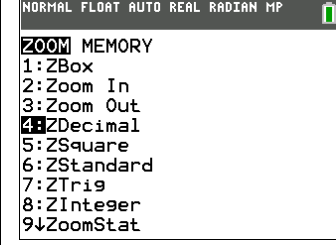
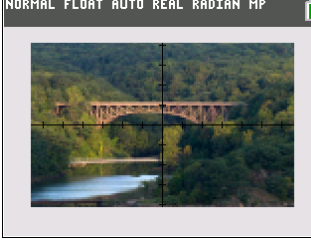
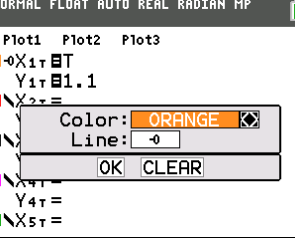
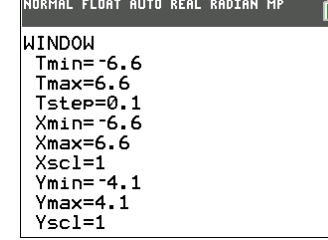
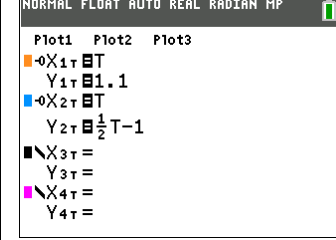
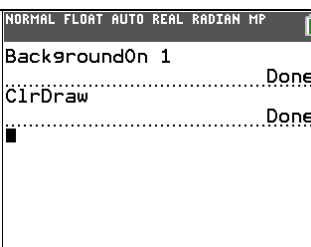
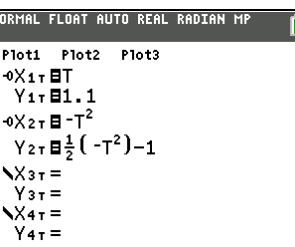
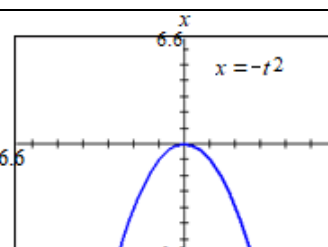
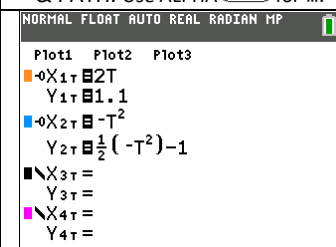
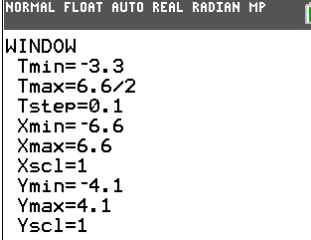
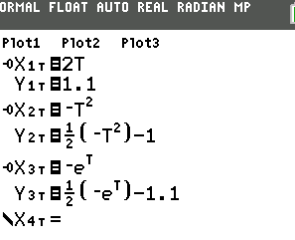
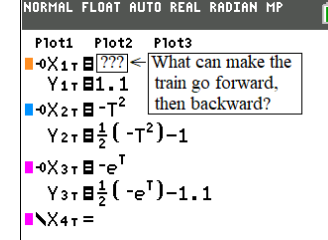
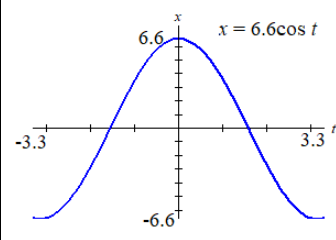
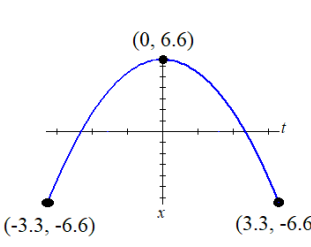
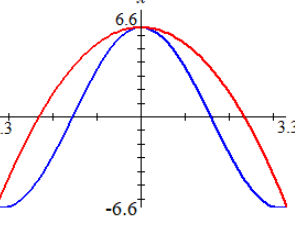


ANIMATION AND MATH

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 <p>1. MODE: Parametric and Simultaneous Graphing</p>	 <p>2. Use 2nd DRAW \square 1:BackgroundOn 1 for Image1</p>	 <p>3. Check FORMAT settings.</p>	 <p>4. ZOOM Decimal</p>
 <p>5. Suppose train path is $y = 1.1$</p>	 <p>6. GraphStyle ORANGE & PATH</p>	 <p>7. WINDOW Tmin=Xmin and Tmax=Xmax</p>	 <p>8. Boat path $y = \frac{1}{2}x - 1$ in LT BLUE & PATH. Use ALPHA \square for \dots</p>
 <p>9. Use 2nd DRAW \square:ClrDraw to replay. What's wrong?</p>	 <p>10. Boat can go forward and backward</p>	 <p>11. Boat does not appear on stage until about $t = -3$ (We want $-6.6 \leq x \leq 6.6$)</p>	 <p>12. Train at double speed</p>
 <p>13. Adjust the timing using Tmin and Tmax</p>	 <p>14. Add drama with two boats, one speeds up once it is chased.</p>	 <p>15. Many models are possible.</p>	 <p>16. Try $x = 6.6\cos t$</p>
 <p>17. Try this shifted upside down parabola $x = -\frac{40}{33}t^2 + 6.6$.</p>	 <p>18. Compare the rates of change.</p>	<p>Use Emulator States on TI-SmartView™ to load different modeling scenarios.</p> <p>Connect with Precalc curriculum:</p> <p>Eliminate the parameter t to write y explicitly as a function of x. Indicate any domain restrictions so that your explicit form that involves only y and x has the same domain as the parametric form that involves $x, y,$ and t.</p> <ol style="list-style-type: none"> $x = 9t - 9$ $y = 17\cos(9t - 9) - 3$ $x = 5t - 6$ $y = 10e^{t-1} - 15$ $x = \sqrt{2}t + 1$ $y = 10 \tan(\sqrt{2}t - 1) + 3$ $x = \ln t$ $y = \frac{2}{\ln t} - \ln t$ $x = 4\cos t$ $y = 9 - 20\cos t$ $x = e^t$ $y = 3e^t + 4e^t - 5$ 	