

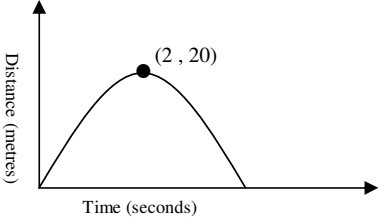
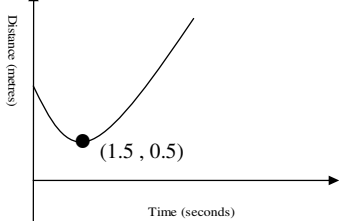
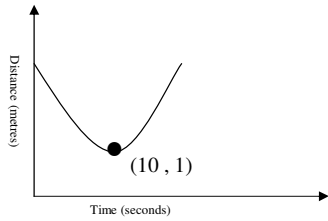
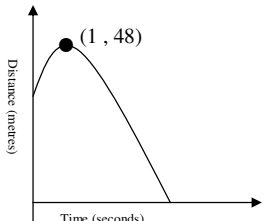
Connecting Graphs & Equations to Real-Life Situations

Given the two equations

- $d = 0.2t^2 - 0.6t + 0.95$
- $d = -5t^2 + 20t$

Given the two equations

- $d = -3t^2 + 6t + 45$
- $d = 0.08t^2 - 1.6t + 9$

<p>The holder places the football on the ground and holds it for the place kicker. The ball is kicked up in the air and lands down field.</p>	<p>A four-wheeled cart is held at the bottom of a ramp. It is given a gentle push so that it rolls part of the way up the ramp, slows, stops and then rolls back down the ramp. A motion detector is placed at the top of the ramp to detect the motion of the cart.</p>	<p>A student stands facing a motion detector. He quickly walks toward the detector, slows down, stops and then slowly walks away from the detector. He speeds up as he gets farther away from the detector.</p>	<p>A diver is on the diving platform at Wonder Mountain in Canada's Wonderland. She jumps up and dives into the water at the base of the mountain.</p>
<p>Equation:</p>	<p>Equation:</p>	<p>Equation:</p>	<p>Equation:</p>
			
<ol style="list-style-type: none"> 1. What is the height of the football at 0 seconds? 	<ol style="list-style-type: none"> 1. How far is the cart from the detector at the start? 	<ol style="list-style-type: none"> 1. How far is the student from the detector when he starts to walk? 	<ol style="list-style-type: none"> 1. How high is the platform above the ground?
<ol style="list-style-type: none"> 2. What is the maximum height of the football? 	<ol style="list-style-type: none"> 2. When is the cart closest to the detector? 	<ol style="list-style-type: none"> 2. When is the student closest to the detector? 	<ol style="list-style-type: none"> 2. What is the diver's maximum height above the water?
<ol style="list-style-type: none"> 3. What is the height of the ball after 3 seconds? 	<ol style="list-style-type: none"> 3. How far is the cart from the detector at 1 second? 	<ol style="list-style-type: none"> 3. What is his distance from the detector after 2 seconds? 	<ol style="list-style-type: none"> 3. At what time does the diver reach his maximum height?
	<ol style="list-style-type: none"> 4. How far does the cart travel before it stops and starts going back down the ramp? 		

Connecting Graphs & Equations to Real-Life Situations

Given the two equations

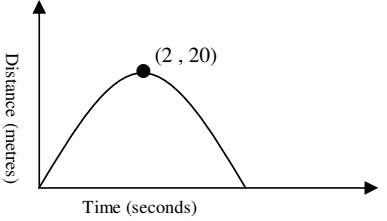
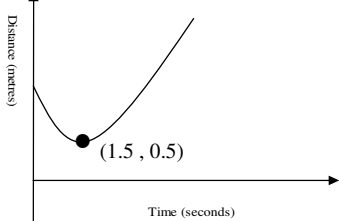
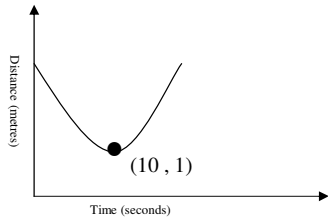
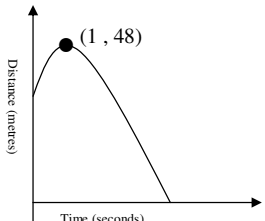
1. $d = 0.2t^2 - 0.6t + 0.95$

2. $d = -5t^2 + 20t$

Given the two equations

3. $d = -3t^2 + 6t + 45$

4. $d = 0.08t^2 - 1.6t + 9$

<p>The holder places the football on the ground and holds it for the place kicker. The ball is kicked up in the air and lands down field.</p>	<p>A four-wheeled cart is held at the bottom of a ramp. It is given a gentle push so that it rolls part of the way up the ramp, slows, stops and then rolls back down the ramp. A motion detector is placed at the top of the ramp to detect the motion of the cart.</p>	<p>A student stands facing a motion detector. He quickly walks toward the detector, slows down, stops and then slowly walks away from the detector. He speeds up as he gets farther away from the detector.</p>	<p>A diver is on the diving platform at Wonder Mountain in Canada's Wonderland. She jumps up and dives into the water at the base of the mountain.</p>
<p>Equation:</p> $d = -5t^2 + 20t$	<p>Equation:</p> $d = 0.2t^2 - 0.6t + 0.95$	<p>Equation:</p> $d = 0.08t^2 - 1.6t + 9$	<p>Equation:</p> $d = -3t^2 + 6t + 45$
			
<p>4. What is the height of the football at 0 seconds?</p> <p style="text-align: center;">0</p>	<p>1. How far is the cart from the detector at the start?</p> <p style="text-align: center;">0.95 m</p>	<p>1. How far is the student from the detector when he starts to walk?</p> <p style="text-align: center;">9 m</p>	<p>1. How high is the platform above the ground?</p> <p style="text-align: center;">45</p>
<p>5. What is the maximum height of the football?</p> <p style="text-align: center;">20</p>	<p>2. When is the cart closest to the detector?</p> <p style="text-align: center;">1.5 sec</p>	<p>2. When is the student closest to the detector?</p> <p style="text-align: center;">10sec</p>	<p>2. What is the diver's maximum height above the water?</p> <p style="text-align: center;">48 m</p>
<p>6. What is the height of the ball after 3 seconds?</p> <p style="text-align: center;">15</p>	<p>3. How far is the cart from the detector at 1 second?</p> <p style="text-align: center;">0.55 m</p>	<p>3. What is his distance from the detector after 2 seconds?</p> <p style="text-align: center;">6.12 m</p>	<p>3. At what time does the diver reach his maximum height?</p> <p style="text-align: center;">1 sec</p>
	<p>4. How far does the cart travel before it stops and starts going back down the ramp?</p> <p style="text-align: center;">$0.95 - 0.5 = 0.45m$</p>		