<html>

<head>

<script type="text/javascript">

function clearForm()

{

 document.getElementById("t").value = "";

 document.getElementById("d").value = "";

 document.getElementById("v").value = "";

 if(document.getElementById("system").checked)

 {

 document.getElementById("ld").innerHTML = "feet";

 document.getElementById("lv").innerHTML = "feet/sec";

 }

 else

 {

 document.getElementById("ld").innerHTML = "meters";

 document.getElementById("lv").innerHTML = "meters/sec";

 }

}

function roundTo4(raw)

{

 strFloat = raw.toString();

 var newFloat;

 if(strFloat.indexOf(".") > 0 && strFloat.length - strFloat.indexOf(".") > 5)

 {

 strFloat = strFloat.substring(0,strFloat.indexOf(".") + 6);

 var numFloat = parseFloat(strFloat);

 var rndFloat = Math.round(numFloat \* 10000);

 var temp1Float = rndFloat / 10000;

 var temp2Float = temp1Float.toString();

 newFloat = temp2Float.substring(0,temp2Float.indexOf(".") + 5);

 }

 else

 {

 newFloat = strFloat;

 }

 return newFloat;

}

function Gravity(box)

{

 if(document.getElementById("system").checked)

 {

 if(box == "t")

 {

 // calculate distance

 var seconds = document.getElementById(box).value;

 var feet = (32.173 \* seconds \* seconds)/2;

 document.getElementById("d").value = roundTo4(feet);

 // calculate velocity

 var vi = 32.173 \* seconds;

 document.getElementById("v").value = roundTo4(vi);

 }

 if(box == "d")

 {

 // calculate time

 var feet = document.getElementById(box).value;

 var seconds = Math.sqrt( ( (2 \* feet) / 32) );

 document.getElementById("t").value = roundTo4(seconds);

 // calculate velocity

 var vi = 32.173 \* seconds;

 document.getElementById("v").value = roundTo4(vi);

 }

 if(box == "v")

 {

 // calculate time

 var velocity = document.getElementById(box).value;

 var seconds = velocity / 32;

 document.getElementById("t").value = roundTo4(seconds);

 // calculate distance

 var feet = (32.173 \* seconds \* seconds)/2;

 document.getElementById("d").value = roundTo4(feet);

 }

 }

 else

 {

 if(box == "t")

 {

 // calculate distance

 var seconds = document.getElementById(box).value;

 var meters = (9.8 \* seconds \* seconds)/2;

 var miles = meters/5280;

 document.getElementById("d").value = roundTo4(meters);

 // calculate velocity

 var vi = 9.8 \* seconds;

 document.getElementById("v").value = roundTo4(vi);

 }

 if(box == "d")

 {

 // calculate time

 var feet = document.getElementById(box).value;

 var seconds = Math.sqrt( ( (2 \* feet) / 9.8) );

 document.getElementById("t").value = roundTo4(seconds);

 // calculate velocity

 var vi = 9.8 \* seconds;

 document.getElementById("v").value = roundTo4(vi);

 }

 if(box == "v")

 {

 // calculate time

 var velocity = document.getElementById(box).value;

 var seconds = velocity / 9.8;

 document.getElementById("t").value = roundTo4(seconds);

 // calculate distance

 var feet = (9.8 \* seconds \* seconds)/2;

 document.getElementById("d").value = roundTo4(feet);

 }

 }

}

</script>

</head>

<body>

<form action="javascript:return false;">

<input id="system" type="radio" name="system" value="feet" onclick="clearForm()" checked />Feet

<input type="radio" name="system" value="meters" onclick="clearForm()" />Meters<br />

Time (sec):<input id="t" style="text-align:right" type="text" onchange="Gravity('t')"></input><br />

Distance: <input id="d" style="text-align:right" type="text" onchange="Gravity('d')"></input><label id="ld">feet</label><br />

Velocity: <input id="v" style="text-align:right" type="text" onchange="Gravity('v')"></input><label id="lv">feet/sec</label><br />

<button>Calculate</button><br />

</form>

</body>

</html>