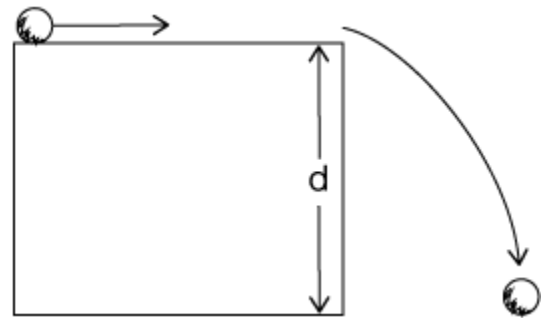


Projectile Motion Worksheet

- 1) A ball rolls with a constant speed of 2.0 m/s across a level table that is 1.0 m above the floor. Upon reaching the edge of the table, it follows a parabolic path to the floor. How far along the floor is the landing spot from the table?

X Problem (horizontal motion equation)

$S = D/T$	$d =$ $s =$ $t =$
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Y problem (vertical free fall equations)

$d = 1/2gt^2$	$d =$ $g =$ $t =$
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- 2) A rescue pilot drops a survival kit while her plane is flying at an altitude of 2000.0 m with a forward velocity of 100.0 m/s. If air friction is disregarded, how far in advance of the starving explorer's drop zone should she release the package?

X Problem (horizontal motion equation)

$S = D/T$	$d =$ $s =$ $t =$
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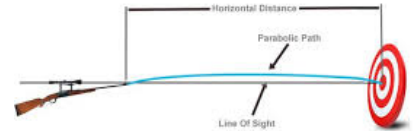
Y problem (vertical free fall equations)

$d = 1/2gt^2$	$d =$ $g =$ $t =$
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- 3) A rifle is fired horizontally and travels 2000m. The rifle barrel is 1.90m from the ground. What horizontal speed must the bullet have been travelling at? Ignore friction.

X Problem (horizontal motion)

$S = D/T$	$d =$ $s =$ $t =$
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Y problem (vertical free fall equations)

$d = 1/2gt^2$	$d =$ $g =$ $t =$
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- 4) A skier leaves the horizontal end of a ramp with a velocity of 25.0 m/s [E] and lands 70.0 m from the base of the ramp. How high is the end of the ramp from the ground?

X Problem (horizontal motion equation)

$S = D/T$	$d =$ $s =$ $t =$
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Y problem (vertical free fall equations)

$d = 1/2gt^2$	$d =$ $g =$ $t =$
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- 5) An astronaut stands on the edge of a lunar crater and throws a half-eaten Twinkie™ horizontally with a velocity of 5.00 m/s. The floor of the crater is 100.0 m below the astronaut. What horizontal distance will the Twinkie™ travel before hitting the floor of the crater? (The acceleration of gravity on the moon is $1/6^{\text{th}}$ that of the Earth).

X Problem (horizontal motion equation)

$S = D/T$	d = s = t =
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Y problem (vertical free fall equations)

$d = 1/2gt^2$	d = g = t =
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