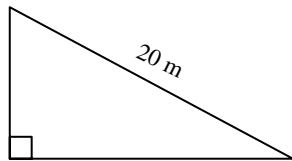


CA Algebra 1 Standard 23.0

MULTIPLE CHOICE

1. The length of the base of a triangle is 5 inches longer than its height. The area of the triangle is 12 in^2 . What is the height of the triangle?
A. 3 inches
B. 5 inches
C. 6 inches
D. 8 inches
2. The formula $d = 0.5at^2$ gives the distance d an object starting at rest t seconds after it is released with initial acceleration, a . A ball rolls down the ramp shown below with an acceleration of 4 m/s^2 . How long, to the nearest tenth, does it take for the ball to roll down the ramp?



- A. 1.8 seconds
B. 3.2 seconds
C. 10 seconds
D. 100 seconds
3. The diving board at a swimming pool is approximately 27 feet above the water. The equation $h = -16t^2 + 1.6t + 27$ gives a diver's approximate height h after t seconds. About how long does it take the diver to enter the water?
A. about 0.9 seconds
B. about 1.4 seconds
C. about 2 seconds
D. about 2.3 seconds
4. Billy is flying in a hot air balloon. From an altitude of 3,000 feet, Billy throws a ball straight down toward the ground. When the ball leaves his hand, its speed is 30 feet per second. Approximately how long will it take the ball to hit the ground? This situation can be modeled by the equation $h = -16t^2 + vt + s$, where h is height, v is initial velocity, t is time, and s is initial height.
A. approximately 12.8 seconds
B. approximately 14.7 seconds
C. approximately 29.3 seconds
D. approximately 219.5 seconds
5. The width of a rectangle is 3 cm less than the length. The area of the rectangle is 54 cm^2 . What are the dimensions of the rectangle?
A. 6 cm by 8 cm
B. 6 cm by 9 cm
C. 6 cm by 3 cm
D. 10 cm by 7 cm

6. The length of a rectangular field is 2 meters longer than the width. The area is 20 m^2 . What is the length of the field?
- A. approximately 2.6 meters
B. approximately 3.6 meters
C. approximately 4.6 meters
D. approximately 5.6 meters
7. The equation $-16t^2 + 25t$ models the height of a soccer ball t seconds after it is kicked. When will the height of the ball reach 9 feet?
- A. at $t = 0.5625$ second and $t = 1$ second
B. at $t = 0.5625$ second only
C. at $t = 1$ second only
D. the height will never reach 9 feet
8. A whale jumped out of the water. Its path can be modeled by the equation $h = -0.2d^2 + 2d$, where h represents the height of the whale and d represents horizontal distance in feet. How far did the whale jump?
- A. 3 feet
B. 4 feet
C. 8 feet
D. 10 feet
9. A local park has a lake with a water cannon that sprays the water across the lake. The path of the water spray is modeled by the equation $h = -0.006d^2 + 1.2d + 10$, where h is the height of the water spray and d is the distance in feet across the lake. How far across the lake does the water land?
- A. approximately 208 feet
B. approximately 215 feet
C. approximately 300 feet
D. approximately 325 feet
10. The height of a right triangle is 1 inch less than the length of the base. The area of the triangle is 10 in^2 . What is the height of the triangle?
- A. 3 inches
B. 4 inches
C. 5 inches
D. 6 inches