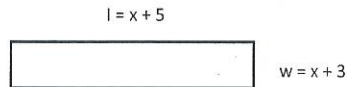


- Which expression is equivalent to $t^2 - 36$?
 - $(t - 6)(t - 6)$
 - $(t + 6)(t - 6)$
 - $(t - 12)(t + 3)$
 - $(t - 12)(t + 3)$
- The floor of a rectangular cage has a length 4 feet greater than its width, w . James will increase both dimensions of the floor by 2 feet. Which equation represents the new area, N , of the floor of the cage?
 - $N = w^2 + 4w$
 - $N = w^2 + 6w$
 - $N = w^2 + 6w + 8$
 - $N = w^2 + 8w + 12$
- A rectangular garden measured 4 feet wide and 6 feet long. Each dimension is increased by x feet. Which equation represents the new area, A , of the garden?
 - $A = 2x + 10$
 - $A = x^2 + 10$
 - $A = x^2 + 24$
 - $A = x^2 + 10x + 24$
- The area is found using the formula $A = lw$, where A is the area, l is the length, and w is the width. The rectangle below has an area of 63 square feet.



What is the width of the rectangle to the nearest foot?

- What is the sum of the zeros of the function $f(x) = x^2 - 6x + 8$?

- While standing on a cliff 24 feet above the lake, Serena threw a rock with an initial velocity of 20 feet per second. The equation $h = -16t^2 + 20t + 24$ gives the height h of the rock after t seconds. How many seconds does it take for the rock to hit the water? (no calculator)
- The function $f(t) = -5t^2 + 20t + 60$ models the approximate height of an object t seconds after it is launched. How many seconds does it take the object to hit the ground? (no calculator)
- A rock is thrown up from the ground at an initial velocity of 84 feet per second. The formula $h = -16t^2 + 84t$ gives the rock's height in feet after t seconds. What is the maximum height of the rock?
 - 68 feet
 - 84 feet
 - 110 feet
 - 179 feet
- A baseball is thrown upward from the top of a building. The height of the ball t seconds after it was thrown into the air is modeled by the function $h(t) = -16t^2 + 50t + 75$. How many seconds does it take for the ball to hit the ground?
 - 1.5 seconds
 - 3 seconds
 - 4.2 seconds
 - 6.3 seconds

10. Which is the graph of the function $f(x) = 4x^2 - 8x + 7$?

