wk12_d1

Evaluating Formulas

Evaluate each formula for the given information. First copy the formula, then substitute the values provided for the variables and show the steps necessary to find the solution.

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1. If $P = 2L + 2W$, where P = perimeter of a rectangle, L = length, and W = width,

   find P when:

   L = 16 ft
   W = 10 ft

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2. If $V = IR$, where V = voltage, I = amperage, and R = resistance,

   find V, when:

   I = 8 amps
   R = 3.5 ohms

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3. If $I = PRT$, where I = amount of interest, P = principal, R = interest rate, T = time in years,

   find I when:

   P = \$650
   R = 4%
   T = 3 yrs

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4. If $V = \pi r^2 h$ where V = volume of a cylinder, r = radius, and h = height,

   find V when:

   π = 3.14
   r = 4 cm
   h = 10 cm

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5. If $S = \frac{n}{2}(t_1 + t_n)$ where S = sum of the terms of a sequence, n = number of terms, t_1 = first term, and t_n = last term,

   find S when:

   n = 15
   t_1 = 7
   t_n = 31

6. If $C = \frac{5}{9}(F - 32)$ where C = Celsius temperature, and F = Fahrenheit temperature,

find C when:

$F = 68°$

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7. If $c^2 = a^2 + b^2$, where c = length of the hypotenuse, a and b = lengths of the sides of a triangle,

find c when:

$a = 9$
$b = 12$

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8. If $H = 5 - (16t^2 - 200t)$, where H = height of a bullet in feet, and t = number of seconds,

find H when:

$t = 10$

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9. If $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$, where d = distance between two points, (x_1, y_1) = coordinates of first point, and (x_2, y_2) = coordinates of second point,

find d when:

$x_1 = 2$
$x_2 = 5$
$y_1 = 4$
$y_2 = 9$

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10. If $V = \left(\frac{h}{2}\right)^2 \left[L - h + \frac{4\pi}{3}\right]$, where V = volume of a propane tank, h = height, and L = length,

find V when:

$\pi = 3.14$
$h = 3$ ft
$L = 6$ ft