HW - Writing and Solving Equations Practice

1. The speed limit on an Arizona highway is 75 miles per hour. Suppose a truck traveling at the speed limit drives 225 miles before the driver stops for a break. Solve an equation to find the length of time the truck has traveled.

    1) Define the variable.
    2) Write an equation.
    3) Solve the equation.

2. A survey of teens showed that teens in Pittsburgh aged 12-17 spend 15.8 hours per week online. Teens in Miami/Ft. Lauderdale spend 14.2 hours per week online. Write and solve an equation to find the difference in time spent online by teens in these cities.

    1) Define the variable.
    2) Write an equation.
    3) Solve the equation.

3. A gardening expert recommends that flower bulbs be planted to a depth of three times their height. Suppose Jenna determines that a certain bulb should be planted at a depth of 4.5 inches. Write and solve an equation to find the height of the bulb.

    1) Define the variable.
    2) Write an equation.
    3) Solve the equation.

4. The average great hammerhead shark is 11.75 feet long. It is 12.75 feet shorter than the average whale shark. Write and solve an equation to find the length of the average whale shark.

   1) Define the variable.
   2) Write an equation.
   3) Solve the equation.

5. In his home aquarium, Steve has 11 times as many guppies as he has goldfish. Steve just counted 66 guppies. Write and solve an equation to find how many goldfish he has.

   1) Define the variable.
   2) Write an equation.
   3) Solve the equation.

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Answer Section

1. t = time (hours)
    75t = 225
    t = 3 hours
2. t = difference in time spent online
    14.2 + t = 15.8
    t = 1.6 hours
3. h = height of the bulb
    3h = 4.5
    h = 1.5 inches
4. L = length of the average whale shark
    L − 12.75 = 11.75
    L = 24.5 feet
5. g = number of goldfish
    11g = 66
    g = 6 goldfish