004 An algorithm a day…

Algorithm Question

Source: OCR GCSE Computing Exam June 2011

A dog that is 5 years old is equivalent to a 42 year old human. You need to write a program that converts the age of a dog to the equivalent age of a human.

Write an algorithm which:

- Asks for the age of the dog in years
- If the age is 2 or less, the human equivalent is 12 times the age
- If the age is more than 2, the human equivalent is 24 for the first 2 years, plus 6 for every additional year.

[5 marks]

Algorithm Example Answer

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*****There are always different ways to solve a problem. This algorithm is just an example. What is important is that the logic is correct!*****

LOGIC:

Allows an input for the dog's age
Multiplies age by 12 if age is less than or equal to 2
If age is greater than 2:
Works out how many years over 2
Multiplies the number by 6
Adds 24 (for the first 2 years)

EXAMPLE ALGORITHM:

```
dogs_age = input("Enter your dog's age: ")
dogs_age = int(dogs_age)
if dogs_age <= 2 then
     human_dog_years = dogs_age * 12
else
     extra_years = dogs_age - 2
     human_dog_years = 24 + (extra_years * 6)
endif
```