Answer on Question #72155 – Math – Algebra

Question

Amir is older than Nadeem by 4 years and Danish is younger than Saleem by 4 year. But Saleem's age is 1/4th of Amir. If Danish's Age is 8 years .
(a) How many time is Nadeem in age to Saleem's age?
(b) What is the age of Amir, Nadeem, Saleem, and Danish?

Solution

Let A, D, N, S be Amir's, Danish's, Nadeem's, Saleem's ages respectively.
Then

$$A = N + 4,\ D = S - 4,\ S = \frac{1}{4}A,\ D = 8.$$

So,

$$S = D + 4 = 8 + 4 = 12,$$
$$A = 4S = 4 \times 12 = 48,$$
$$N = A - 4 = 48 - 4 = 44,$$
$$\frac{N}{S} = \frac{44}{12} = \frac{11}{3}.$$

Answer:
(a) $\frac{N}{S} = \frac{44}{12} = \frac{11}{3}$;
(b) Amir's age is $A = 48$, Nadeem's age is $N = 44$,
Saleem's age is $S = 12$, Danish's age is $D = 8$.