More on Fractions

1 Bottle A contains some blue and red marbles.
Bottle B contains 32 blue and red marbles.
After 4 blue marbles are transferred to Bottle A from Bottle B, the number of blue marbles in Bottle B is $\frac{4}{9}$ the total number of marbles in Bottle B.
How many blue marbles are there in Bottle B at first?

Ans: _____ blue marbles

2 Bottle A contains 30 blue and red marbles.
Bottle B contains some blue and red marbles.
How many red marbles must be transferred from Bottle B to Bottle A so that the number of red marbles in Bottle A is $\frac{3}{5}$ the number of marbles in Bottle A?

Ans: _____ red marbles

Solution:

1 After, Bottle B $\rightarrow \frac{4}{9} = \frac{8}{18} = \frac{12}{27} = \frac{16}{36}$

Before, $\frac{16-4}{36-4} = \frac{12}{32}$

Ans: 12 blue marbles

2 After, $\frac{3}{5} = \frac{6}{10} = \frac{9}{15} = \frac{21}{35}$

Before, $\frac{21-5}{35-5} = \frac{16}{30}$

Ans: 5 red marbles