

Practice Problems

Answer each of the following questions. Show your work and write your statements clearly.

1. Darren and Mick shared 96 marbles in the ratio 5 : 3. Darren then shared his marbles with Henry in the ratio 11 : 4. How many fewer marbles did Henry get than Mick?

2. At an exhibition, the ratio of the number of adults to the number of children was $8 : 3$. The ratio of the number of men to the number of women was $3 : 1$. If there were 44 adults and children at the exhibition, how many more children than women were there?



3. The ratio of the number of Ann's picture cards to the number of Wendy's picture cards was 7 : 8. After Wendy gave 8 picture cards to Ann, they each had the same number of picture cards. How many picture cards did they have altogether?

KEY

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1. Darren and Mick shared 96 marbles in the ratio 5 : 3. Darren then shared his marbles with Henry in the ratio 11 : 4. How many fewer marbles did Henry get than Mick?

Darren :  } $96 \div 8 = 12$ Darren = $12 \cdot 5 = 60$
 Mick :  } Mick = $12 \cdot 3 = 36$

Darren : 11 } $60 \div 15$ Darren $4 \cdot 11 = 44$
 Henry : 4 } Henry $4 \cdot 4 = 16$

36^M
 $- 16^H$
20 fewer

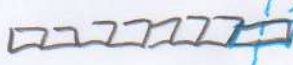
2. At an exhibition, the ratio of the number of adults to the number of children was 8 : 3. The ratio of the number of men to the number of women was 3 : 1. If there were 44 adults and children at the exhibition, how many more children than women were there?

Adult : 8 } $44 \div 11 \text{ units} = 4$ $8 \cdot 4 = 32$ Adults
 Child : 3 } $3 \cdot 4 = 12$ children

Adults \rightarrow Men : 3 } $32 \div 4 = 8$ $3 \cdot 8 = 24$ men
 Women : 1 } $1 \cdot 8 = 8$ women

12^C
 $- 8^W$
4 more children

3. The ratio of the number of Ann's picture cards to the number of Wendy's picture cards was 7 : 8. After Wendy gave 8 picture cards to Ann, they each had the same number of picture cards. How many picture cards did they have altogether?

A : 
 W : 

Difference of 1 unit. Therefore Wendy gives $\frac{1}{2}$ a unit to be equal.

* $\frac{1}{2}$ a unit is 8 cards, so 1 unit is 16.

Ann = $16 - 7 = 9$ originally
 Wendy = $16 - 8 = 8$: "
 } 240 altogether!