



Lets solve some more  
real life problems

A group of 54 people is traveling by bus. Each child has 2 pieces of luggage and each adult has 3 pieces of luggage. The total number of pieces of luggage is 111.

How many of the travelers are children?

Let  $x$  = # of children  
Let  $y$  = # of adults



$$\begin{array}{l} 2 [ x+y=54 ] \rightarrow 2x+2y=108 \\ 2x+3y=111 \end{array}$$

$$\begin{array}{r} 2x+3y=111 \\ \underline{-2x-2y=108} \\ -y=-3 \\ \underline{-1 \quad -1} \\ y=3 \end{array}$$

$$\begin{array}{r} x+y=54 \\ x+3=54 \\ \underline{-3 \quad -3} \end{array}$$

$$x=51$$

51 students

The sum of two numbers is 36. Their difference is 6. Find the numbers.

Let  $x$  = first number

Let  $y$  = second number

$$\begin{array}{r} x+y=36 \\ + \quad x-y=6 \\ \hline 2x=42 \\ \frac{2x}{2}=\frac{42}{2} \\ x=21 \end{array}$$

$$\begin{array}{r} x+y=36 \\ 21+y=36 \\ -21 \quad -21 \\ \hline y=15 \end{array}$$

The two numbers are 21 and 15.

You could also eliminate "x" by subtraction:

$$\begin{array}{r} x+y=36 \\ - \quad x-y=6 \\ \hline 2y=30 \\ \frac{2y}{2}=\frac{30}{2} \\ y=15 \end{array}$$

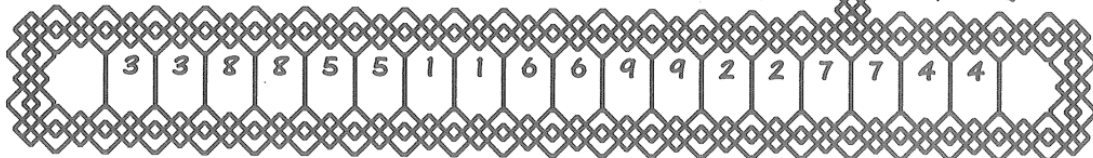
$$\begin{array}{r} x+y=36 \\ x+15=36 \\ -15 \quad -15 \\ \hline x=21 \end{array}$$

# What Do You Get When You Cross a Monastery With a Lion?

Write the two letters for each correct answer in the two boxes with the exercise number.

- The sum of two numbers is 92. Their difference is 20. Find the numbers.
- The difference of two numbers is 16. The greater number is 5 less than 4 times the smaller number. Find the numbers.
- A 100-foot cable is cut into two pieces. The first piece is 18 ft longer than the second. How long is each piece?
- Three apples and four bananas cost \$4.85. Three apples and ten bananas cost \$8.75. Find the cost of an apple.
- Stilt scored 5 points less than twice the number scored by Dunk. Together they scored a total of 43 points. How many points were scored by each player?
- Bert's age plus twice Ernie's age is 30. Three times Bert's age plus 8 times Ernie's age is 108. How old are Bert and Ernie?
- The Rocket Coaster has 15 cars, some that hold 4 people and some that hold 6 people. There is room for 72 people altogether. How many 4-passenger cars are there? How many 6-passenger cars are there?
- Tickets to the Valentine Dance cost \$3 per person or \$5 per couple. If \$475 worth of tickets were sold and 180 people attended the dance, how many couples were there?
- Pi High School ordered 40 science books. The next week, the school ordered 30 algebra books. The bill for the first order was \$360 greater than the bill for the second order. The two bills together totaled \$3960. Find the price of an algebra book.

OF	14, 10
LA	9, 6
AR	59 ft, 41 ft
EN	\$0.82
IA	\$60
NG	56, 36
SO	25, 18
FR	12, 9
ED	62
TH	57 ft, 43 ft
RP	23, 7
EE	\$57
OA	65
RI	27, 16
ST	58, 38
CE	\$0.75
EA	8, 7



# Homework

Finish classwork