Optimization Function:

$$max(american\_flights * 30{,}000\ lbs. + british\_flights * 20{,}000\ lbs.)$$

Constraints:

$$\$7{,}000{,}000|\$5{,}000{,}000 \geq \$9{,}000 * american\_flights + \$5{,}000 british\_flights$$

$$44 \geq american\_planes + british\_planes$$

$$64 \geq 2 * american\_planes + british\_planes$$

$$american\_flights = 21 * american\_planes$$

$$british\_flights = 21 * british\_planes$$

$$american\_planes = int$$

$$british\_planes = int$$

Explanation: I'm trying to maximize the total weight carried by American and British flights, taking into account two budget scenarios of $7 million and $5 million. I can't have more than 44 planes in total, and another constraint caps the weighted sum of American and British planes at 64. Each American plane makes 21 flights and each British plane makes 21 flights as well. Both the number of American and British planes must be integers.

Berlin 7 Million Dollar Budget

Cargo	
American	30,000
British	20,000

Cost	
American	9,000
British	5,000

Budget	Planes	Crews	Trips
≤$7,000,000	≤ 44	≤ 64	21

Planes	Count
American	20
British	24

Measure	Totals
Cost	6300000
Planes	44
Crew	64

Flight Counts	
American	420
British	504

Capacity
max 22680000

Berlin 5 Million Dollar Budget

Cargo	
American	30,000
British	20,000

Cost	
American	9,000
British	5,000

Budget	Planes	Crews	Trips
≤$5,000,000	≤ 44	≤ 64	21

Planes	Count
American	4
British	39

Measure	Totals
Cost	4851000
Planes	43
Crew	47

Flight Counts	
American	84
British	819

Capacity
max 18900000