

P-02: Airplane Fuel Problem (<https://www.richstowell.com/stem-outreach/word-problems/>)

Bluebird Aviation operates from one of Valley County's general aviation airports, transporting people and supplies to Idaho's backcountry airstrips. Bluebird's pilot must depart from her home airport to drop off supplies at an airstrip that is 40 minutes away in cruise flight, and then return home. To maximize the supplies she can take, the pilot wants only enough fuel on board for the round trip, plus the legally required 30-minute fuel reserve. Airplane performance charts show the following: taxi, takeoff, and climb will use 23 pounds of fuel; cruise will use 78 pounds of fuel per hour; and descent, landing, and taxi will use 11 pounds of fuel. How many gallons of fuel does the pilot need to put in the fuel tanks? Aviation fuel weighs six pounds per gallon.

Solution Package Requirements:

1. Draw it – show the problem as a picture, diagram, or sketch
2. Rewrite it – extract the critical information from the word problem
3. Solve it – show an organized approach to the solution