

CHAPTER 1 Mathematical Processes  
1.7 Focus on Reflecting  
Reflecting on and evaluating strategies

**Example:**

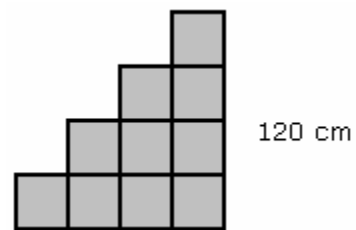
**a)** Andrea is a stage hand at a theatre. She needed to make stairs to a stage 1.2 m above the floor using cubes measuring 30 cm on a side. If the stairs are 1 cube wide, and each step is 1 cube high, how many cubes does she need?

**b)** An airliner took off and climbed at an angle of  $30^\circ$  at a speed of 300 m/s. How long would it take to get to its cruising altitude of 9000 m?

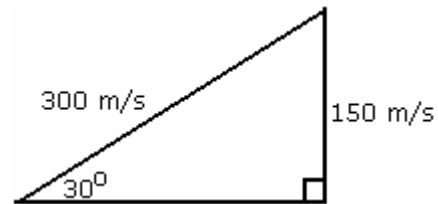


**Solution:**

**a)** An appropriate strategy is to draw and label a diagram. Andrea needs 10 cubes.



**b)** Use a ruler and protractor to construct a scale model of the flight path. The airliner gains altitude at 150 m/s. It will take  $\frac{9000}{150} = 60$  s to reach 9000 m.



**Practice:**

1. Dessert at a class picnic is a choice of two scoops of ice-cream chosen from 7 different flavours. Each student picks two different flavours, and all possible combinations were used exactly once each. How many students were in the class?
2. A unit fraction has 1 as a numerator and another whole number as a denominator. Write  $\frac{11}{24}$  as the sum of two different unit fractions.

**Answers:**

1. 21
2.  $\frac{1}{3} + \frac{1}{8}$