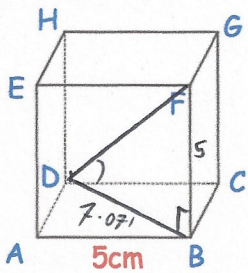


7th October



Corbettmaths



$$BD^2 = 5^2 + 5^2$$

$$BD^2 = 50$$

$$BD = 7.071$$

Calculate angle BDF

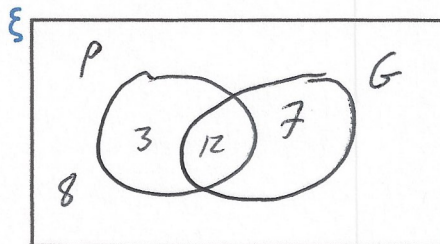
$$\tan BDF = \frac{5}{7.071}$$

$$35.26^\circ$$

In a class of 30 students

15 students play the piano  
19 students play the guitar  
8 students play neither instrument.

Represent this information on a Venn diagram

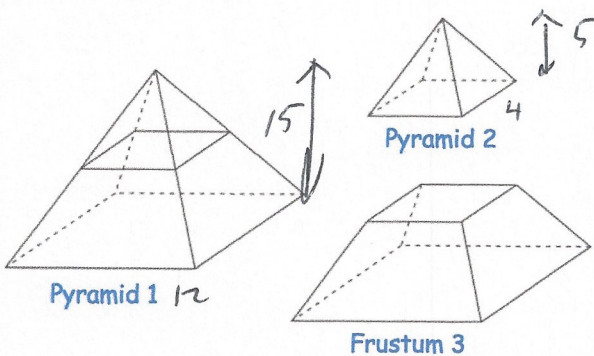


A student is selected at random.

Given the student plays the piano, work out the probability that they do not play the guitar.

$$\frac{3}{15} = \frac{1}{5}$$

A square based pyramid 1 is divided into two parts: a square based pyramid 2 and a frustum 3, as shown.



Pyramid 1 has a base of side length 12cm.  
Pyramid 2 has a base of side length 4cm.  
The perpendicular height of pyramid 1 is 15cm.

Calculate the volume of frustum 3.

Pyramid 1:

$$\frac{1}{3} \times 12^2 \times 15 = 720 \text{ cm}^3$$

Pyramid 2:

$$\frac{1}{3} \times 4^2 \times 5 = 26.6$$

$$720 - 26.6 = 693.3 \text{ cm}^3$$