

m6 = 12 days  
 to go!

A sequence of numbers is shown.

$$\begin{array}{ccccccc}
 2 & 9 & 16 & 23 & 30 & \dots & \dots \\
 \frown & \frown & \frown & \frown & & & \\
 7 & 7 & 7 & 7 & & & 
 \end{array}$$

(a) Find an expression for the  $n$ th term of the sequence.

$$\begin{array}{l}
 7n \quad 7, 14, 21, 28, 35 \\
 7n - 5 \qquad \qquad \qquad 7n - 5 \\
 \hline
 \qquad \qquad \qquad \qquad \qquad \qquad (2)
 \end{array}$$

(b) Find the 100th term in the sequence.

$$\begin{array}{l}
 7 \times 100 - 5 \\
 700 - 5 \\
 695 \\
 \hline
 \qquad \qquad \qquad \qquad \qquad \qquad (2)
 \end{array}$$

20 John and Jake roll a dice which is biased.

They both roll the dice a number of times.

The table below shows the results of their trials.

	Number of trials	Number of sixes	Relative frequency
John	60	13	$\frac{13}{60} = 0.216 = 0.22$
Jake	150	44	$\frac{44}{150} = 0.293 = 0.29$

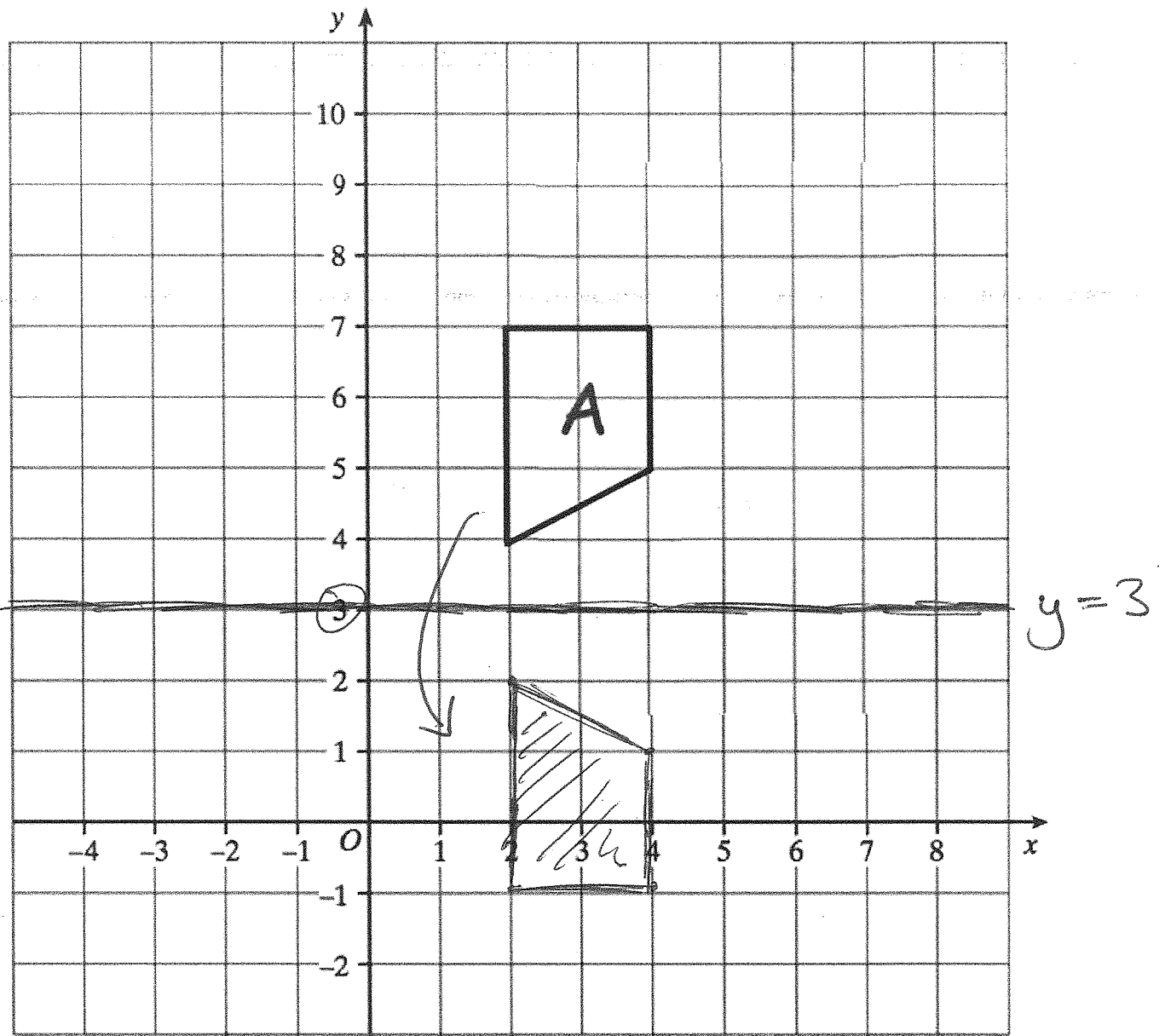
(a) Calculate the relative frequencies, to 2 decimal places, for each boy and complete the table. [2]

(b) Which boy's trials give a more reliable estimate of the likelihood of rolling a six on this dice?

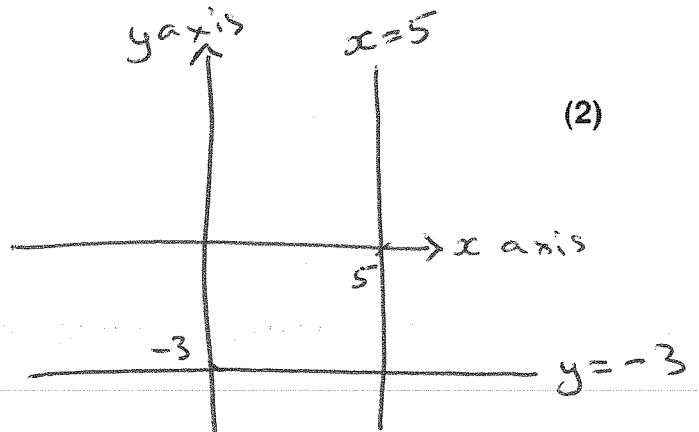
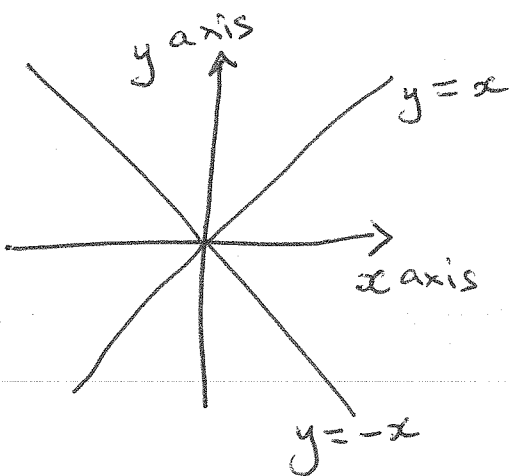
Give a reason for your answer.

Jake's answer is better as he took more trials or experiments.  
 The more times it is done, the more accurate

Answer Jake is more reliable [1]



Reflect shape A in the line  $y = 3$   
 Label the new shape B.



Know these sorts of lines.