Find probabilities from two-way tablesa) Complete the two-way table for these students

b) A student is selected at random.

Fill in the missing information.
$P($ dark hair $)=\frac{3}{5}$
$P$ (light hair and name has five or more letters) $=\frac{1}{5}$
c) Annie is going to the cinema with one of the students above.


What is the probability that the student has fewer than five letters in their name?
(2)
a) Complete the two-way table for these numbers.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |


|  | Factor of 30 | Not a factor <br> of 30 | Total |
| :---: | :---: | :---: | :---: |
| Multiple <br> of 3 | 3 | 3 | 6 |
| Not a <br> multiple <br> of 3 | 4 | 10 | 14 |
| Total | 7 | 13 | 20 |

b) Discuss with a partner the strategies you used to complete the table.
c) A card is selected at random.

Fill in the missing information.
$\mathrm{P}($ multiple of 3$)=\frac{3}{10}$
$P($ not a factor of 30$)=\frac{13}{20}$
$P($ multiple of 3 but not a factor of 30$)=\frac{3}{20}$
d) Alex has selected a multiple of 3

What is the probability that it is also a factor of 30 ?

120 students were asked if they play sport and if they play an instrument.

This two-way table shows information about books in a library.

|  | Fiction | Non-fiction | Total |
| :---: | :---: | :---: | :---: |
| Hardback | 50 | 150 | 200 |
| Paperback | 480 | 320 | 800 |
| Total | 530 | 470 | 1,000 |

a) Use the information below to complete the table.

b) A book is selected at random.

Work out the probability that it is a fiction paperback.
Give your answer in its simplest form.
c) A non-fiction book is selected at random.

Work out the probability that it is a hardback.
Give your answer in its simplest form

