

Rearrange the cards to explain how to find what fraction of the total area is shaded.

As line AC intersects line MD at point E , the two opposite angles $\angle MEF$ and $\angle AED$ are equal.	A
The line MF is half the length of AD .	B
Line AD is parallel to line MF , so $\angle EDA$ and $\angle EMF$ are equal, and $\angle EAD$ and $\angle EFM$ are equal (alternate angles).	C
Therefore, $\triangle AED$ and $\triangle FEM$ are similar.	D
Therefore, the line EH is half the length of PE .	E
Let $ABCD$ be a unit square.	F
Therefore, the shaded area $MEFG = \frac{1}{24} \times 2 = \frac{1}{12}$ sq units.	G
PH has length $\frac{1}{2}$ units, so PE has length $\frac{1}{3}$ units and EH has length $\frac{1}{6}$ units.	H
$\triangle MEF$ has area $\frac{1}{2} \left(\frac{1}{2} \times \frac{1}{6} \right) = \frac{1}{24}$ sq units.	I

