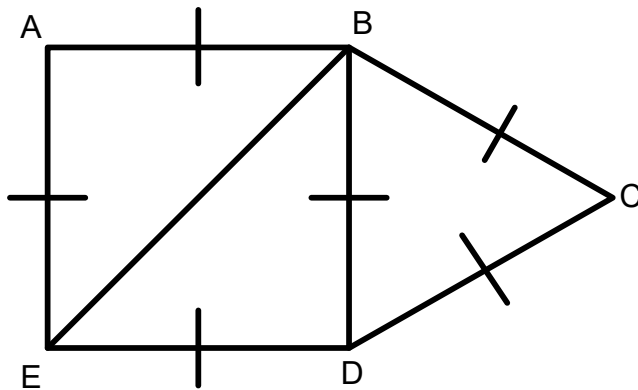A   B

ABDE is a square.

BCD is an equilateral triangle.

Calculate the size of angle EBC.
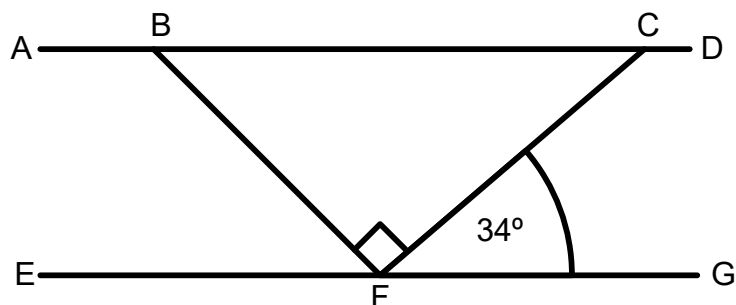
E   D

Q2

$$\frac{15}{24} \times \frac{32}{27} \times \frac{81}{100} \times \frac{8}{18} =$$

Q3

Estimate

$$\frac{23.982 \times 7.392}{19.983 \times 84.90321} =$$

Q1   DO NOT SCALE

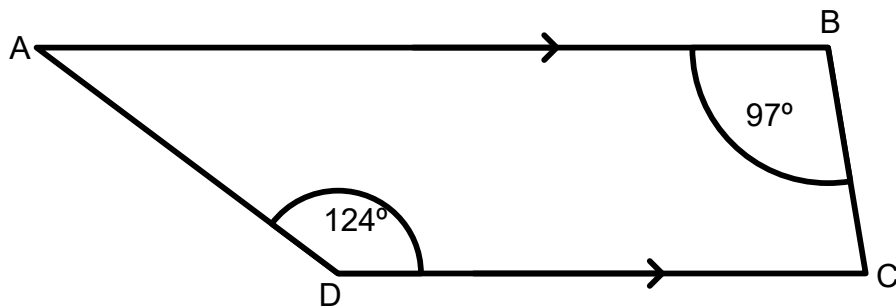Find the size of angle ABF. **Give reasons**.

Q2

Two fair six faced dice are thrown simultaneously. Below is a sample space for the dice showing what happens when we add the dice together.

+	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

Draw a similar sample space diagram but this time consider what would happen if the two dice were multiplied together.

Q3

a. Use your sample space diagram to calculate P(dice = 16).
b. Use your sample space diagram to calculate P(dice<9).
c. Use your sample space diagram to calculate P(dice≤5).

Do NOT scale

a) What is the name of the shape above?
b) Calculate the size of angle DAB. Give reasons.
c) Calculate the size of angle BCD. Give reasons.
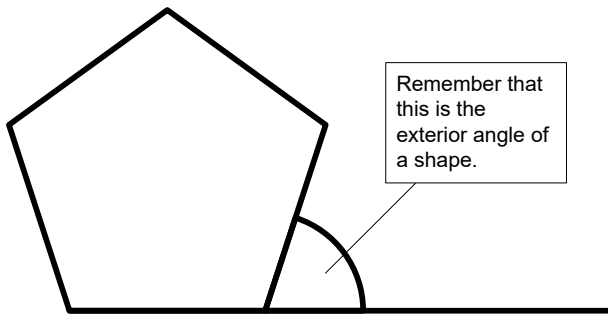
Q2

Simplify and calculate.

$$\frac{25}{42} \times \frac{81}{39} \times \frac{28}{45} \times \frac{6}{15} =$$

Q3

Two coins are flipped in the air. Draw a sample space diagram for the results.

What is the chance of one of the coins landing on heads and the other landing on tails?

Q1

Remember that this is the exterior angle of a shape.

$$Exterior\ Angle = \frac{360}{n}$$

where n is the number of sides.

Find the exterior angles of the following regular shapes:

    a. pentagon
    b. decagon
    c. triangle
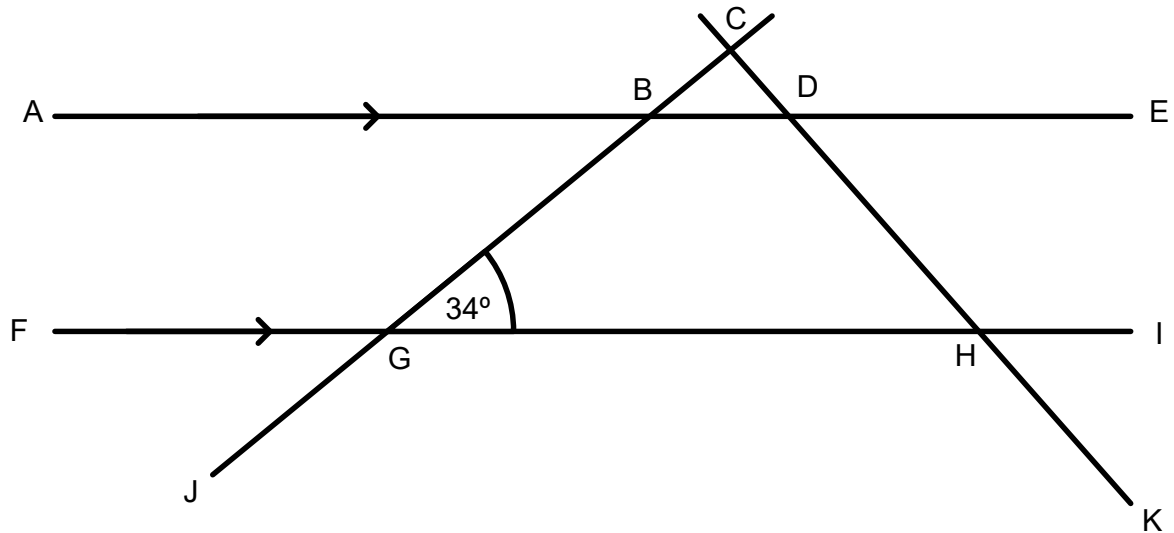   d. square
    e. dodecagon

Q2   Simplify and Calculate

$$\frac{33}{60} \times \frac{45}{55} \times \frac{32}{132} \times \frac{15}{16} \times \frac{18}{36} =$$

Q3   Write the meaning of the following words in a mathematical context.

    a   product

    b   integer

    c   sum

    d   total

    e   quotient

    f   difference

    g   vertex

Q1

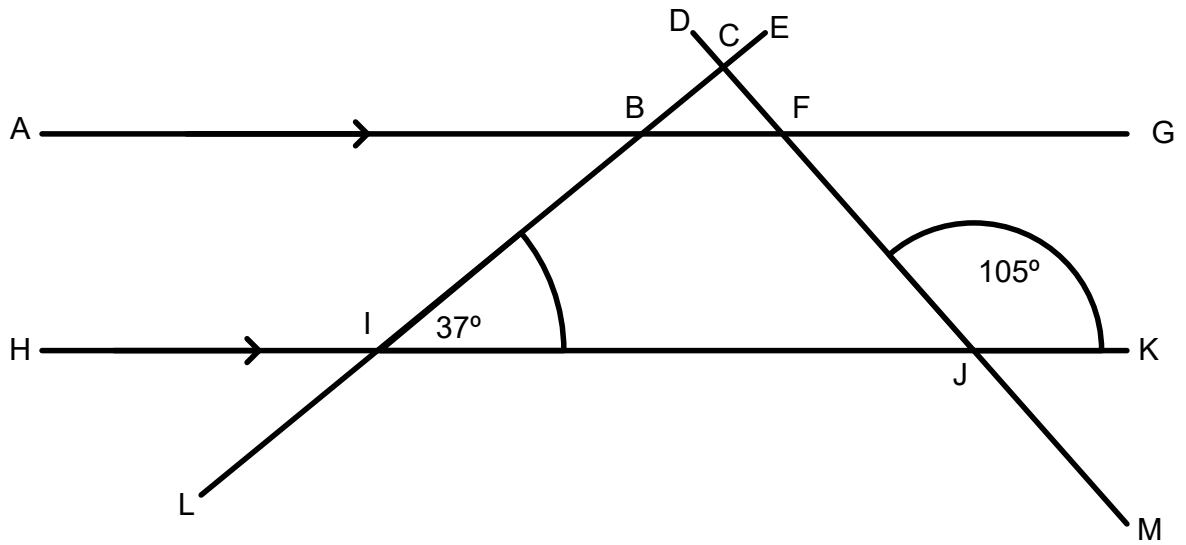Line segments AE and FI are parallel.

Angle BGH is 34°.

List all the other angles that are 34 degrees and for each one, state the reason why. (To help, look at the sheets that you stuck in your maths books in class).

Q2

Write down the value of each square number and each cube number up to and including the values of 10^2 and 10^3.

Q3

Find the HCF (35,63) and LCM (35,62)

Calculate all the angles shown on this diagram. Give reasons.

Q2

Draw six different quadrilaterals and name each one.

Q3

Bill and Ben both drove buses. Bill's bus took 28 minutes to complete its journey whilst Ben's bus took 42 minutes to complete its journey. If both buses set off from the bus station at 9am, at what time would they both be back at the depot at the same time? (Hint: this is an LCM question).