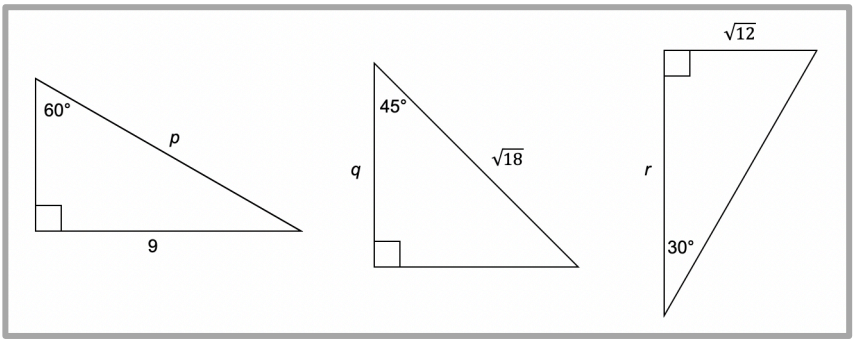
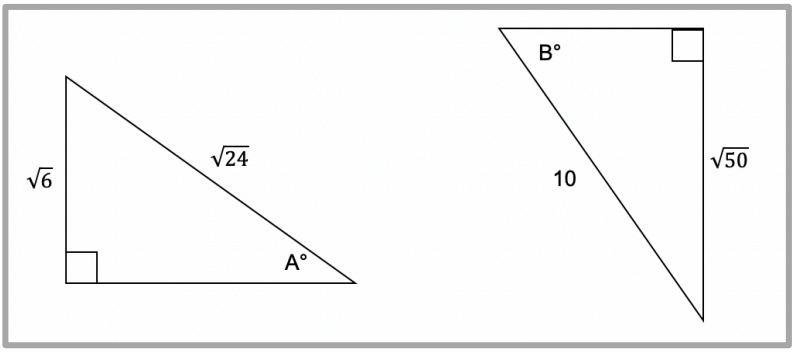
**BRIDGE Day 3**
**Independent Practice**
**Trigonometry with surds: no calculators!**

KING'S MATHS SCHOOL

1 Work out the unknown side lengths



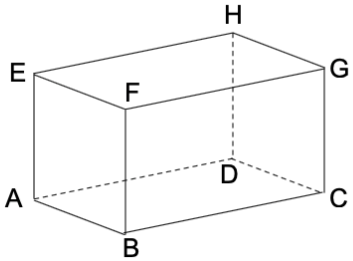

2 Work out the unknown angles




3

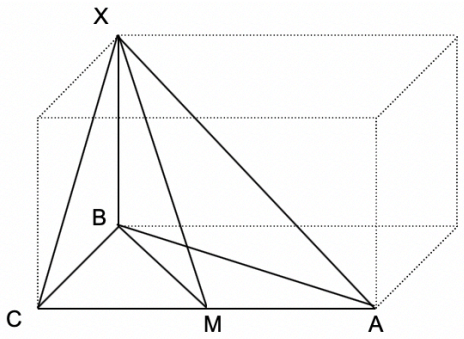
In the cuboid ABCDEFGH
AB = $\sqrt{3}$ cm, BC = 4 cm, and AG = $\sqrt{20}$ cm

Find angle FAB.



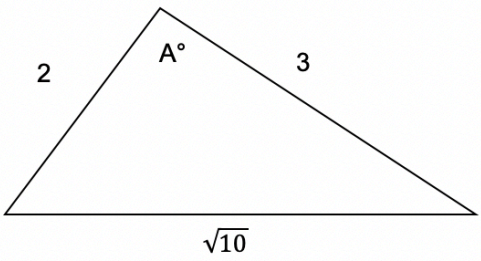

4

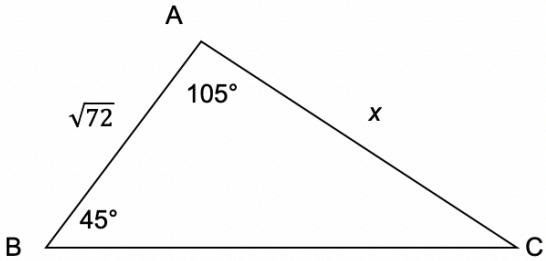
The diagram shows a cuboid.
Angle BAX = 30° and angle BCX = 60°.
BC has length 2 cm and M is the mid-point of AC
Find angle BMX.



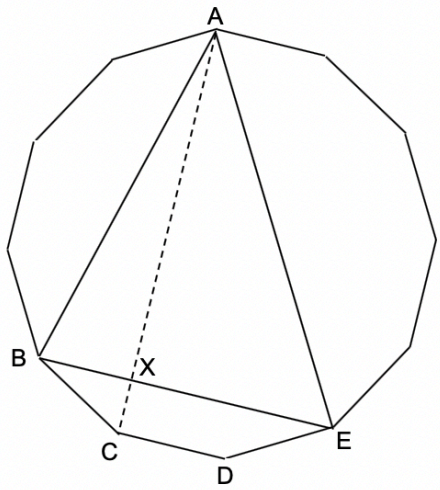
5 Triangle ABC has area 6. If AB = $2\sqrt{3}$ and BC = 4, find angle ABC.

6 Work out the unknowns:




7 The diagram shows a regular dodecagon. If the length of each side of the dodecagon is 1cm, find the area of triangle ABE.




8 A rectangular box 40 cm by 120 cm rests against a vertical wall as shown in the diagram. What is the exact height of the highest point of the box above the ground?