

Approximation

(Questions from exam papers)

- 1) A box of chocolate weighs 15kg to the nearest kg.

Work out the least and greatest total weight of 10 boxes of chocolate.

- 2) A cable is 50m long to the nearest metre. Mari cuts off a piece which is 15m long to the nearest 10cm.

Calculate the maximum length of the remaining cable.

- 3) Keith has a plank of wood of length 610cm to the nearest 10cm. He uses a cutting machine to cut the plank into pieces. Each piece of wood is of length 15cm, correct to the nearest half centimetre.

Find the maximum number of pieces of wood that Keith can be certain of getting.

- 4) A builders merchant has 15 tonnes of sand to the nearest tonne. He puts the sand into bags. Each bag must contain 25kg to the nearest kilogram.

How many bags can he be certain to fill?

- 5) Mr Walsh wishes to paint the outside walls of his house. A tin of paint covers 25m^2 , correct to the nearest 5m^2 . The outside walls of his house have an area of 320m^2 , correct to the nearest 10m^2 .

Calculate the maximum number of tins that he may have to buy.

Approximation II

(Questions from exam papers)

- 1) A jar of honey weighs 56g to the nearest g.

Work out the least and greatest total weight of 10 jars of honey.

- 2) A piece of string is 15m long to the nearest half-metre. Derek cuts off a piece which is 8m long to the nearest 10cm.

Calculate the maximum length of the remaining string.

- 3) Dave has a stick of rock from Cromer of length 30cm to the nearest 10cm. He uses a cutting machine to cut the rock into pieces. Each piece of rock is of length 2cm, correct to the nearest 2mm.

Find the maximum number of pieces of wood that Dave can be certain of getting.

- 4) A builders merchant has 20 tonnes of rubble to the nearest tonne. He puts the rubble into bags. Each bag must contain 50kg to the nearest kilogram.

How many bags can the builders merchant be certain to fill?

- 5) Mr Walsh wishes to paint the walls of his classroom. A tin of special child-proof classroom paint covers 15m^2 , correct to the nearest 3m^2 . The walls of his classroom have an area of 50m^2 , correct to the nearest 10m^2 .

Calculate the maximum number of tins that he may have to buy.