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10 (a) A box is a cuboid with length 45 cm, width 30 cm and height 42 cm.
The box is completely filled with 90.72 kg of sand.

Calculate the density of this sand in kg/m^3.
[Density = mass ÷ volume]

.... kg/m^3 [3]

(b) A bag contains 15000 cm^3 of sand.
Some of this sand is used to completely fill a hole in the shape of a cylinder.
The hole is 30 cm deep and has radius 10 cm.

Calculate the percentage of the sand from the bag that is used.

....% [3]

(c) Sand costs $98.90 per tonne.
This cost includes a tax of 15%.

Calculate the amount of tax paid per tonne of sand.

$ .... [3]

(d) Raj buys some sand for 3540 rupees.

Calculate the cost in dollars when the exchange rate is $1 = 70.8 rupees.

$ .... [2]