

9. Ben and Catrin both buy new fleece jackets.



The label inside Ben's jacket says:

Astra Jacket
90% Polyester, 10% Elastane
Soft fleece fabric 180g/m²

The label inside Catrin's jacket says:

Snug Jacket
80% Polyester, 20% Elastane
Stretchy fleece fabric 140g/m²

Ben and Catrin know the following facts about their jackets.

- Ben's jacket weighs 234 g.
- Catrin's jacket is made with 8% less fleece fabric than Ben's jacket.

(a) How much does Catrin's *Snug Jacket* weigh?
You must show your working.

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- (b) The density of the fleece fabric in *Snug Jackets* is actually 140 g/m^2 , correct to the nearest 2 g/m^2 .
This fabric is sold to the makers of the jackets on cardboard rolls.
A cardboard roll with fleece fabric on it weighs 4.5 kg .
The empty cardboard roll weighs 360 g .



Complete the following sentence by inserting a correct value, accurate to 4 significant figures.

The roll contains **at least** m^2 of *Snug Jacket* fleece fabric.

You must show your working.

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13. The table below gives the density of 3 metals.

Metal	Density
Platinum	21.4 g/cm ³
Gold	19.3 g/cm ³
Silver	10.5 g/cm ³

Density can also be measured in 'troy ounces/cubic inch'.
The density of gold is 10.13 troy ounces/cubic inch.
Calculate the density of platinum in troy ounces/cubic inch.

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Platinum = troy ounces/cubic inch.

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