Strauss Preparatory School

Name: Dimeji Olugbodi
Class: Year 5
Date: _____
Subject: Math
Learning objective: I can solve problems involving conversion of units of mass.

1. Convert these grams measurements into kilograms, using decimal notation.

1354g	2400g	3510g	8495g	100g	10 430g

2. Convert these kilogram measurements into grams.

1.2kg	3.57kg	1.265kg	4.13kg	10.95kg	0.5kg

3. Shopbot the robot has computed the mass that they think they are able to lift. Are they correct? Explain how you know.

Guidelines:

Robots with a mass of 165kg or greater **and** a height of 170cm or taller can lift boxes up to 20kg.

Robots with a mass less than 165kg **or** a height less than 170cm can lift boxes up to 16kg in mass.
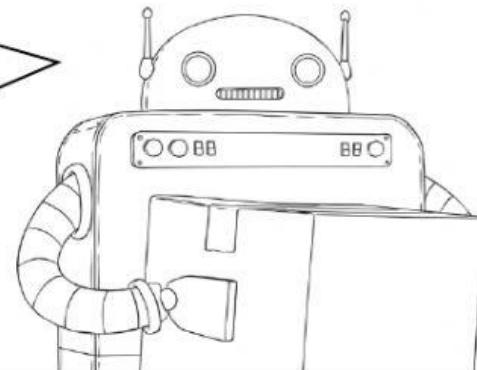
Name	✓ or ×	Explanation
Shopbot 169kg 159cm 'I can lift up to 16kg.'	**Yes** or **No**	

4. Shoptimus weighs 170kg and is 175cm tall.
   The box packed by Shoptimus contains these items:

Washing powder: 2900g
Fruit: 2.95kg
Vegetables: 2.78kg
Tinned items: 4320g
Packets: 2.4kg
Frozen items: 965g

Is Shoptimus strong enough
to lift the box? Show how
you worked out the answer.
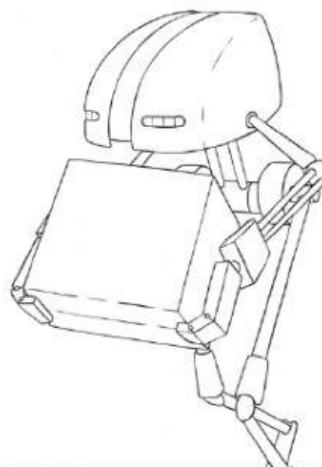
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16kg in mass.

Is Shoptimus able to lift the box? Yes ☐ No ☐

5. Roboshop can lift up to 20kg. After putting these items in a box, Roboshop's internal
   processor computed that the box was too heavy.

Roboshop's box contains:

Sack of potatoes: 3800g
Garden tools: 6.15kg
Fruit: 3.765kg
Vegetables: 2.95kg
Tinned items: 3660g
Packets: 1.8kg
Frozen items: 685g

Roboshop takes out the packets and the frozen items.
Does the box now contain a suitable mass?
Show how you worked out the answer.
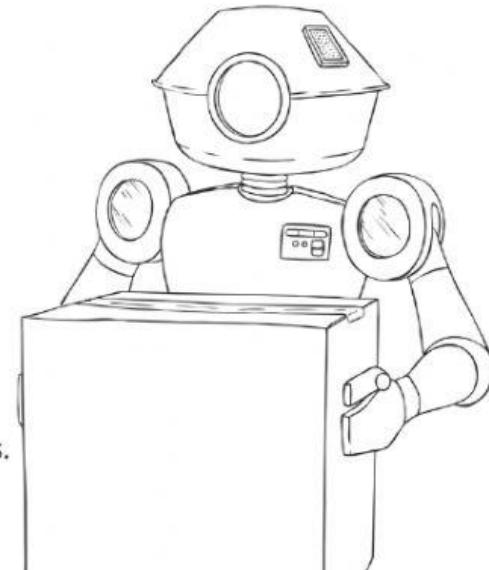
Is Roboshop able to lift the box? Yes ☐ No ☐