

## ACTIVITY EXAMPLE



## KEY WORDS

Number | decimals | ratios | numbers | valuations | calculations | pricing | measurement | width | length | area | perimeter | percentages | diagram | schematic

## ALSO USEFUL FOR

Business studies | Economics | Agriculture | Agribusiness | Science | Digital Technology

## PROGRAMME OUTLINE

### 3 POINTS OF CONTACT

- Gallagher staff come into classroom (x2)
- Workplace visit (x1)

## EXAMPLE

1. Gallagher come into classroom, introduce themselves, background to the business, their careers and how maths is used in the industry. **Student Activity:** Salary mapping and Costing an electric fence activities
2. Workplace visit includes tour of the business, meeting staff and hearing about different careers. Seeing the organisation 'behind the scenes'.
3. **Student Activity:** Packaging and Farm fencing activities



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## ACTIVITY EXAMPLE

### Intro Gallagher group

- Overall company, 80 years, 500 in Hamilton, 1000 round world, we design, build and sell
- Farm fences, Animal weighing
- Security, people fences
- Fuel pumps
- R&D Engineering
  - Idea - Free
  - Test \$
  - Research and test \$\$
  - Build \$\$\$\$
  - Sell

### Intro Gallagher group jobs

- 500 people in Hamilton, 1000 round world
- <https://www.payscale.com/index/NZ/Job>
- <https://www.payscale.com/index/NZ/Employer>
  - Gallagher Group Ltd, average salary of NZ\$74,700 a year
  - Salaries from an average of NZ\$50,756 to NZ\$109,938 a year
- Minimum wage
  - \$17.70/hour \* 40 hours = \$708 \* 52 = 36,816
  - Tax = 14.82%
  - Take home = \$603.11/week , \$31,361.46/year
- NZ average Electronics engineer \$65K, new engineer \$50k, best \$90k
- NZ average CEO in NZ earns \$150k, big company CEO \$250k, Google CEO \$1M+

Draw a line of income from 36k (assembly worker) to 250k (CEO), get the students to add job titles and where they think it sits on the line.



## ACTIVITY EXAMPLE

### Costing an electric fence unit exercise

#### Cost to build an electric fence unit

Count the small parts, each one costs \$0.05

Count the medium size parts, each one costs \$0.50

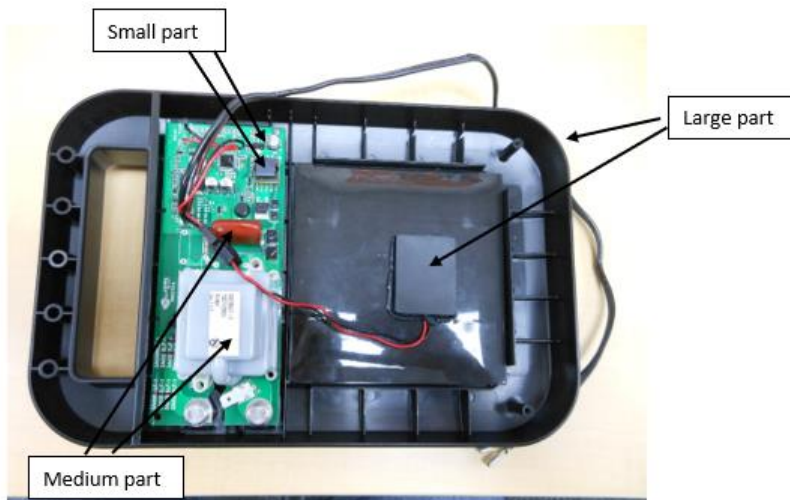
Count the large parts, each one costs \$1

In words, what is the formula for the total cost?

Calculate the total cost?

What if 10x more medium parts are added?

What parts could be removed to reduce the price by \$0.75

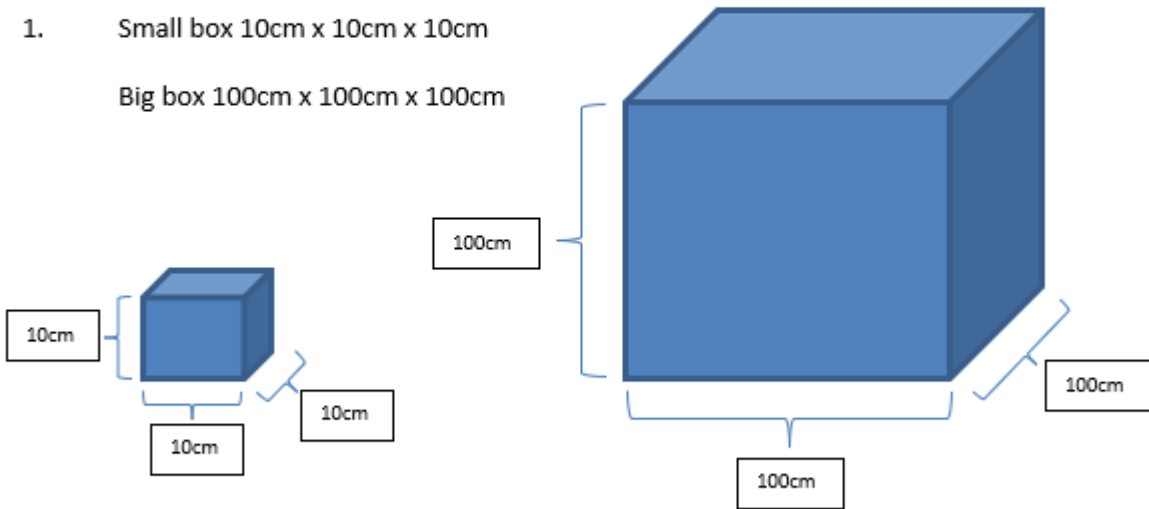


**ACTIVITY EXAMPLE**

## Packaging exercise

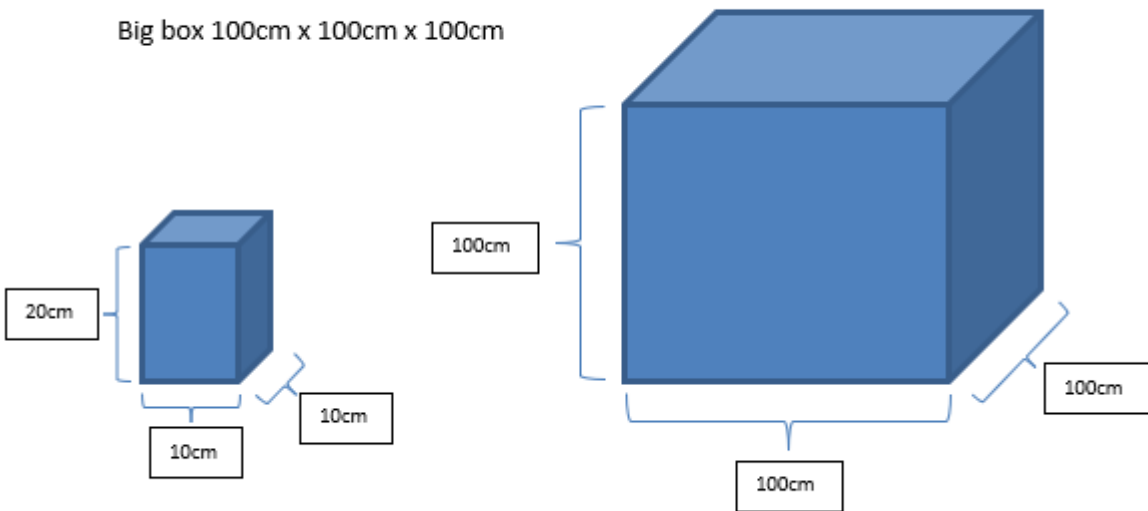
**How many small boxes can you get in a big box?**

- Small box 10cm x 10cm x 10cm  
Big box 100cm x 100cm x 100cm



\*\*\*\*\*

- Small box 20cm x 10cm x 10cm  
Big box 100cm x 100cm x 100cm

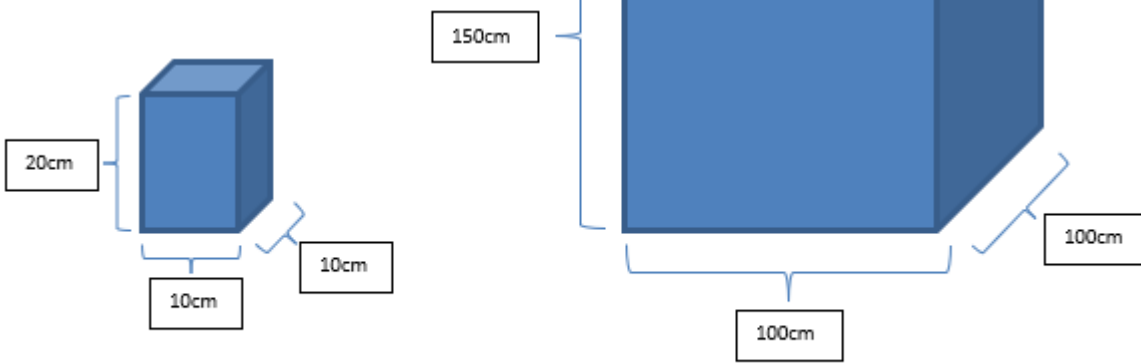


ACTIVITY EXAMPLE

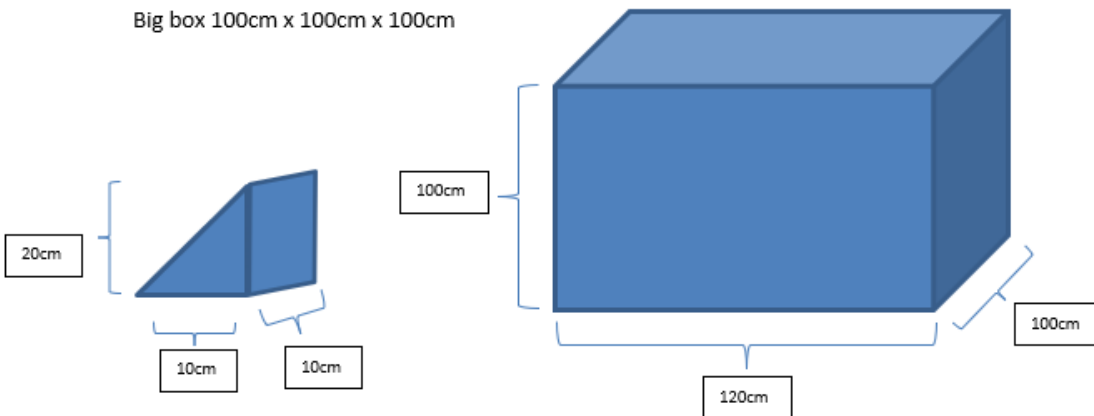


## ACTIVITY EXAMPLE

3. Small box 20cm x 10cm x 10cm  
Big box 150cm x 100cm x 100cm



4. Small triangle box 10cm x 10cm x 10cm  
Big box 100cm x 100cm x 100cm



## ACTIVITY EXAMPLE



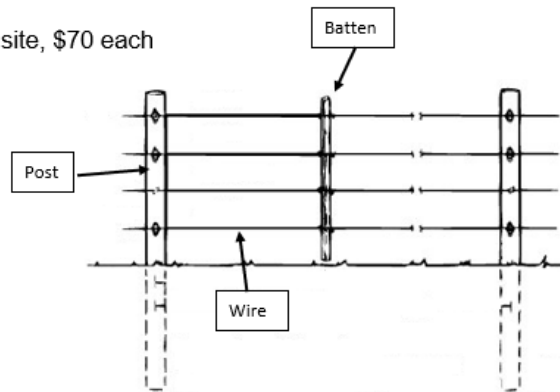
### Farm fencing exercise

#### Gallagher SSEP Farm Fence Math Activity

Gallagher offer a range of farm electric fence energizers, but the farm fence still needs to be built.

Please refer to the diagram as the paddock that you will work with. The information you require is listed below:

- **Fence type:** - 0.8m fence height with 6 wires
- **Corner posts:** located on corners e.g. 4 x for a square site, \$70 each
- **Posts:** 6 meter spacing, \$30 each
- **Battens:** 1m spacing, \$10 each
- **Wire:** Wire \$130/1000m



#### Calculate the following:

1. Calculate the number of corner posts?
2. Calculate the number of posts?
3. Calculate the number of battens?
4. Calculate the total length of wire required?
5. What is the total combined cost of the corner posts, posts and battens?
6. What is the cost of the wire
7. What is the total material costs
8. Add GST (15%) (Goods and services tax)

