

	Process One	Process Two
Total Output	13 miniature kete	13 miniature kete
Productivity	$13 \div 9 = 1.4$	$13 \div 8 = 1.6$
	(output \div workers)	(output \div workers)
Total cost	$13 \times 9 = \$117$	$13 \times 8 = \$104$
	(wages \times workers)	(wages \times workers)
Average cost per unit	$117 \div 13 = \$9$	$104 \div 13 = \$8$

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We were given a task by the teacher to produce as much miniature kete as we could within an hour. They were only about 8cm wide by 8cm long with small handles. The materials were harakeke that was gathered following Ngāti Kahungunu tikanga (Māori protocol¹), pāua shells, knives, and scissors all gathered from local areas and from home, so there was no cost of materials. We did not eat or drink in the room where we were weaving, and washed our hands after we had finished, removing any sap before eating kai. The production was labour intensive and they could be used for putting little presents in and given as gifts. There were 9 workers individually producing as many kete as they could in an hour. At the end of the hour 13 kete were made but were lacking in quality, for some of us didn't know how to make them and I thought it was not a product that would sell in the market.

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For the second task there were 8 workers split into different units that would be doing different jobs (division of labour). The first unit had 2 workers that split the harakeke into strips, measured and cut them into the right lengths. The second unit of 2 workers were softening the flax strips; the third unit of 2 workers were twisting harakeke to make pairs of handles, and taking the softened strips and making the flat weaved bases for each kete. The fourth unit of 2 workers were folding and finishing the weaving and attaching the handles. The economic theory is that if we split the task into individual jobs amongst each other we'd be a lot faster at producing the miniature kete then our first day of production.

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The 2nd production day allowed us to get a head start because we knew what we had to do and also knew the quality needed at each step to make a good quality finished kete. When we split the task into steps it should have been a lot quicker as each individual became faster and more efficient at doing their task (specialisation). If everybody worked faster and was more focused it would have led to an increase in productivity and better quality. At the end of the production it showed that we had improved in terms of quality, the finished kete were much better, but we produced the same amount as we did in the first production. We could have produced more if we had worked hard right through to the end of the hour and everyone had helped in the areas that were lagging behind and all moved to the weaving of the kete step; folding, finishing weaving and weaving in the handles instead of doing nothing. However, productivity did rise from 1.4 to 1.6 per person, because we only had 8 instead of 9 people on the second production day, and we made sure all the kete started were finished. The waste harakeke was returned to the area it was taken from, and we gave the first miniature kete we made as gifts to our friends and whānau.

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I don't think we could sell them because they will be expensive, because we would have to pay the workers minimum wage, that's \$13 per hour times 8 people which is \$104, so we would have to sell them for at least \$8 to cover our average costs. In order for us to make a profit we would probably have to sell them for about \$12 dollars, but we could sell them a lot cheaper (maybe \$5) if we did not have to pay the minimum wage and therefore we could probably make a reasonable profit as there is no cost of materials.

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¹ Harakeke: cultivation, symbolism, and harvesting

Te Papa Tongarewa website: Collections. Topic: Harakeke - New Zealand flax

(Is part of topic *Materials for making Māori cloaks*) <http://collections.tepapa.govt.nz/topic/3623>

If we were to expand production and create a successful small to medium sized business we could create jobs and that would also be a good consequence for the community.

Example: Selling miniature kete would work best in a small business because I don't think too many people would buy this product on its own. The miniature kete would be best added to a bigger business, for example an arts and crafts type business. You could add a range of sizes and colours (using natural dyes) to add value to the kete.

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I think we would use labour intensive methods first to aim for profit maximisation and use the profit to invest capital into the business. This may lead to some of the workers we once had no longer having jobs, but adding capital goods into the production process will make it a lot faster and provide a consistent quality of finished goods...