# 40020 Measure, make patterns or templates, and mark out material in an industrial textile fabrication or trimming workplace

Kaupae   Level	3
Whiwhinga   Credit	15
Whāinga   Purpose	This skill standard is intended for people who want to learn how to perform measurements and calculations, manually make patterns or templates, and mark out material, in an industrial textile fabrication or trimming workplace. This skill standard may be used in programmes leading to qualifications and micro-credentials at Level 3 and above in an Industrial Textile Fabrication discipline.

# Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako   Learning outcomes	Paearu aromatawai   Assessment criteria		
<ol> <li>Interpret job specifications and drawings, for patterns or templates in an industrial textile manufacturing workplace.</li> </ol>	<ul> <li>a. Identify the types of drawings used in the industrial textile fabrication or trimming industry and explain their use/s.</li> </ul>		
	<ul> <li>Explain the difference between a freehand sketch and a Computer Aided Design (CAD) drawing.</li> </ul>		
	<ul> <li>c. Interpret job specifications and drawings in order to carry out and record measurements.</li> </ul>		
	<ul> <li>Take measurements and use appropriate calculations to estimate quantities of material required.</li> </ul>		
<ol> <li>Draw geometric shapes and freehand sketches for an industrial textile fabrication or trimming job.</li> </ol>	a. Identify the types of measurements used for measuring an object prior to sketching.		
	<ul> <li>Explain base line and datum points, dimensions and related notes and their purpose.</li> </ul>		
	<ul> <li>c. Explain the terms 'geometric shape' and 'geometric construction'.</li> </ul>		
	d. Draw the most common geometric shapes used in an industrial textile fabrication workplace.		

		e. Draw freehand sketches and apply measurements to the sketch, in order to communicate job requirements.
3.	Make patterns or templates manually for industrial textile fabrication or trimming	a. Identify the materials used to make patterns or templates and describe how they are used.
	Job.	<ul> <li>b. Identify labelling and reference marks used on patterns or templates and explain their importance.</li> </ul>
		<ul> <li>c. Use job specification and drawing measurements to determine dimensions, allowances, and individual panel sizes.</li> </ul>
		<ul> <li>Select appropriate material, create patterns or templates, add relevant labelling and reference marks and make notes to inform future replication.</li> </ul>
4.	Use patterns or templates to mark out material for industrial textile fabrication or trimming job	a. Prepare an area for measuring and marking out material.
		<ul> <li>Explain the importance of checking materials for faults prior to measuring and marking, and describe what types of faults can occur.</li> </ul>
		c. Explain methods for minimizing waste.
		d. Explain the importance of marking panels for product and assembly identification.
		<ul> <li>Select and lay out materials for measuring and marking and check for faults and sufficient quantity.</li> </ul>
		<ul> <li>f. Use job specifications, patterns or templates and material characteristics to determine the layout of panels that best minimizes waste.</li> </ul>
		g. Measure and mark out panels, apply reference marks, and mark each panel for product and assembly identification.
		h. Record final material usage.

### Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

#### Assessment specifications

The evidence presented for assessment against this skill standard must be consistent with safe working practices and be in accordance with applicable workplace requirements, industry guidelines, legislative requirements, and manufacturer's information. Use of calculator, phone, or other appropriate technology is acceptable for assessment of this skill standard. The learner will need to take their own measurements, using the measurement tool or device selected.

Evidence must be provided of:

Two examples each of length, volume, weight, and angle measurements.

Drawing four different geometric shapes.

Two freehand sketches.

Making patterns or templates and marking out material for three different jobs.

### Definitions

Industry guidelines – those practices and procedures commonly used as standard procedures to produce items of acceptable saleable quality in the industrial textile fabrication and trimming industry such as related textbook descriptors.

Manual handling – using the body to lift, lower, push, pull, carry, move, hold, or restrain goods.

Manufacturer's information – technical information for a machine or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations.

Material(s) – fabric, fittings and any other components used in the manufacture of industrial textile fabrication and trimming products.

Workplace requirements – instructions to staff on policy and procedures that are available in the workplace. These requirements may include – company policies and procedures, work instructions, product quality specifications and legislative requirements.

# Ngā momo whiwhinga | Grades available

Achieved.

#### Ihirangi waitohu | Indicative content

#### Interpreting specifications

- Components of job specifications such as, the customer's requirements, materials to be used, the required shape and dimensions, any aesthetics factors, and any legislative requirements.
- Types of drawings, such as pictorial sketch, general arrangement showing standard views, fabric pattern drawing, detailed construction drawings.

#### Measuring and calculating

- Measurements and calculations such as, area, volume, perimeter, circumference, weights.
- Types of measurements to assist sketching, such as height, width, depth, circumference, diameter, length, angle.

### Shapes and drawing

• Common geometric shapes, such as circle, cube, triangle, square, rectangle, ellipse, hexagon, octagon, cylinder.

• Types of sketches, such as orthographic (2D) from pictorial (3D), pictorial (3D) from orthographic (2D), isometric.

# Making patterns and templates

- Pattern and template making materials, such as hardboard, plastic fabric, pattern paper, metal.
- Pattern and template making methods.
- Labelling and reference marks, such as striker points, fabric direction, allowances, names.
- Preparing an area for marking out, such as space required, material handling, cutting method.
- Accounting for allowances, such as seams, hem stretch, shrinkage.
- Measuring and marking out material for a job, including locating and interpreting overall sizes, methods used for transferring measurements to material and determining individual panel sizes, type of marker, accounting for allowances.

# Rauemi | Resources

### Legislation, regulations and/or industry standards

Legislation, regulations and/or industry standards relevant to this skill standard include but are not limited to:

Health and Safety at Work Act 2015

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this skill standard will take precedence for assessment purposes, pending review of this skill standard.

Legislation can be accessed at: <u>https://www.legislation.govt.nz</u>.

# Pārongo Whakaū Kounga | Quality assurance information

<b>Ngā rōpū whakatau-paerewa  </b> Standard Setting Body	Hanga-Aro-Rau Engineering, Manufacturing and Logistics Workforce Development Council	
Whakaritenga Rārangi Paetae Aromatawai   DASS classification	Manufacturing > Industrial Textile Fabrication and Trimming > Industrial Textile Fabrication Core Skills	
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga   CMR	0014	

Hātepe   Process	<b>Putanga  </b> Version	<b>Rā whakaputa  </b> Review Date	<b>Rā whakamutunga mō te aromatawai  </b> Last date for assessment
<b>Rēhitatanga  </b> Registration	1	30 May 2024	N/A
Korero whakakapinga   Replacement information	This skill standard replaced unit standards 5022, 23487, 23488, 23496, 31510.		
<b>Rā arotake  </b> Planned review date	31 December 2029		

Please contact Hanga-Aro-Rau Engineering, Manufacturing and Logistics Workforce Development Council at <u>qualifications@hangaarorau.nz</u> if you wish to suggest changes to this skill standard.