

## Whakaatu ai ngā ākonga kei te paearu i ngā tukanga pāngarau, tukanga tauanga ki ngā mahi e whai ake nei:

	<p align="center"><b>Hei whakamāramatanga i te paearu (hei āwhina i ngā kaiwhakarite ngohe):</b> <b>Ka taea e te ākonga te:</b></p>	<p align="center"><b>Nō waho atu o te paearu ēnei</b> <b>e whai atu nei:</b></p>
<p><b>1. Ka wānanga, ka whakawhitiwhiti whakaaro ā-pāngarau nei.</b></p>	<ul style="list-style-type: none"> <li>whakamahi i te reo pāngarau motuhake (i ngā kupu/kīanga, i te wetereo, i ngā tikanga kupu) e hāngai ana ki te pūāhua</li> <li>whakawhitiwhiti whakaaro pāngarau ki ngā kupu motuhake, ki te wetereo, ki ngā tikanga kupu. Ka whakawhitiwhitia hoki ki ngā hanga kē atu me ngā whakaahuahanga rerekē hei whakapuaki tika i ngā ariā pāngarau</li> <li>whakamahi i ngā whakaahuahanga – ā-waha nei, ā-tuhituhi nei, ā-ataata nei – hei whakamārama, hei kauhau i te ariā pāngarau.</li> </ul>	
<p><b>2. Ka whakahoropaki i te pūāhua.</b></p>	<ul style="list-style-type: none"> <li>whakawhāitihia te pūāhua kia tutuki ai ngā matenga o te whānau, o te hapori, o te hapū, o te iwi</li> <li>tautohu i ngā whakaaro ahurea-pāpori e noho tūāpapa mai ana ki ngā tini horopaki, ki ngā tini pūāhua</li> <li>tautohu i ngā uara me ngā waiaro e pā ana ki ngā whakataunga pāngarau</li> <li>tautohu i ngā tikanga me ngā mātauranga e hāngai ana.</li> </ul>	
<p><b>3. Ka tere, ka tāwariwari te whakaotioti rapanga e kawea ai he paheko tau, ka mārama ki te rahi tauriterite o aua tau, ka mārama hoki ki te otinga, me te tika o taua otinga e hāngai ana ki te horopaki.</b></p>	<ul style="list-style-type: none"> <li>whiriwhiri i te aronga tātaitai tika, ahakoa ko te tuhituhi, ko te mahi ā-hinengaro, ā-matihiko rānei</li> <li>whakamahi i ngā tau oti (tae noa ki ngā piriona), ki ngā hautau, ki ngā tau-ā-ira (tae noa ki te mati-ā-ira tuatoru), ki ngā ōrau, ki ngā tau tōpū</li> <li>whakaotio i ngā rapanga e mau mai ana ngā pāpātanga, ngā taupāpātanga, ngā taupū e kaha ana te puta ake</li> <li>whakamahi i te huamoni tūpā</li> <li>tātai toharite (ko te tau tānui, ko te tau waenga anō hoki).</li> </ul>	<ul style="list-style-type: none"> <li>ko te whakarea me te wehewehe i ngā hautau</li> <li>ko ngā taupū tōraro me ngā taupū hautau</li> <li>ko ngā āhuatanga taupū, ko ngā pāpātanga whakawhiti</li> <li>ko ngā rapanga ōrautanga hoki whakamuri</li> <li>ko te huamoni whakaputu.</li> </ul>
<p><b>4. Ko te mōhio me te whakamahi i ngā rau pānga (rārangi nei, taupū ngāwari nei, pānga poutama nei).</b></p>	<ul style="list-style-type: none"> <li>whakaahuahia hei kauwhata, hei ture ā-kupu rānei, ā, ko te tātai i ngā uara o te pānga e huna ana</li> <li>whakamahi i ngā taupū ngāwari hei tohu i ngā pūāhua e pāpā noa nei ki te tangata i āna kawenga o ia rā, hei tauira, ko te urutā, ko te tupuranga o te taupori, ko te whakamātaotao matū.</li> </ul>	<ul style="list-style-type: none"> <li>ko ngā pānga rārangi kore, me ngā pānga taupūtanga</li> <li>ko ngā pānga poutama e whakamahia nuitia ana, hei tauira, ko ngā pāpātanga utu mō ngā tūnga motukā.</li> </ul>
<p><b>5. Ko te mārama me te whakamahi i ngā hanga mokowā me ngā whakaahuahanga taonga.</b></p>	<ul style="list-style-type: none"> <li>mōhio ki te hangarite me te panoni</li> <li>panoni e.g. te whakarahi, te whakaata, te huri, me te neke hei hoahoa ki te whakatutuki i tētahi kaupapa</li> <li>tūhonohono i ngā whakaahuahanga taonga ngāwari, ahu-2 nei, ahu-3 nei.</li> </ul>	<ul style="list-style-type: none"> <li>ko te whakamahi i ngā motuhanga.</li> </ul>
<p><b>6. Ko te mārama me te whakamahi i ngā pūnaha hei whakatere hei whakatau wāhi, hei whakatau ahunga.</b></p>	<ul style="list-style-type: none"> <li>tātai i te ara haere i waenga i ngā tūwāhi, hei whakaatu i te tūwāhi me te ahunga</li> <li>tāwariwari i te pūnaha e tūhura ai rātou i ēnei mahi i roto i tētahi pūāhua</li> </ul>	<ul style="list-style-type: none"> <li>kāore e whakamahia ana ngā ahunga pērā i te UTT (te uru mā tonga ki te tonga)</li> <li>ngā ahunga.</li> </ul>
<p><b>7. Ko te whakamahi i ngā tau me ngā waeine hei ine, hei whakaahua i ngā taonga hei rahinga, me te whakaawhiwhitanga e tika ana mō te horopaki.</b></p>	<ul style="list-style-type: none"> <li>whakamahi me te whakamāori i ngā putanga o te ine, tae atu ki ngā wātaka me ngā kauwhata wā.</li> <li>āta whiriwhiri i ngā waeine tika me te whakawhitiwhiti i waenga i ngā waeine ngahuru mō te mea e inea ana.</li> <li>whakaotioti i ngā rapanga ine i ngā horopaki whaitake             <ul style="list-style-type: none"> <li>ko te paenga</li> <li>ko te rōrahi (poro-tapawhā hāngai anake)</li> <li>ko te horahanga (tapawhā hāngai, tapawhā whakarara, tapatoru)</li> <li>ko te papatipu</li> <li>ko te paemahana.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>ko ngā inenga porohita.</li> </ul>
<p><b>8. Ko te mārama me te wānanga i te tauanga me ngā raraunga.</b></p>	<ul style="list-style-type: none"> <li>mōhio me te whakamahi i ngā whakaari raraunga hei tūhura pātai, ngā tāpae mō ngā pūāhua whakarāpopoto, ngā pūāhua whakariterite hoki me ngā pūāhua houanga</li> <li>whakamāori i ngā whakaari raraunga mā te whakamahi i te hora, i te rāpoipoi, i te auautanga, i te wēanga, i ngā mōwaho</li> <li>arotake i ngā tāpaetanga kōrero me ngā whakaahuahanga a tangata kē i runga i te āhua o ngā raraunga i kitea.</li> </ul>	<ul style="list-style-type: none"> <li>ko te tīpakopako</li> <li>ko te hīkaro mai i te tīpako ki te taupori</li> <li>ko te tātai toharite</li> <li>ko te kohikohi me te whakariterite raraunga (ina tūpono ara ake tētahi atu mea pēnei, me tāpiri ki te rārangi nei).</li> </ul>
<p><b>9. Ko te whakamahi i te tūponotanga hei whakamāori i ngā pūāhua e whai wāhi mai ana.</b></p>	<ul style="list-style-type: none"> <li>mōhio ki ngā āhuatanga tūpono o ia rā, pērā i ngā tūraru me ngā tūwehe</li> <li>whakamahi i te reo o te tūponotanga hei whakaahua i ngā putanga.</li> </ul>	<ul style="list-style-type: none"> <li>ko te mahi i ngā whakamātau me te whakatairite ki ngā tauira ā-ariā.</li> </ul>

## Learners at the benchmark demonstrate the mathematical/statistical processes through:

	This means that learners can:	The following fall outside the benchmark:
1. Reason and communicate mathematically.	<ul style="list-style-type: none"> <li>use the specialised pāngarau language (e.g., the terms, syntax, and semantics) appropriate to the situation.</li> <li>communicate in a variety of ways using many different representations (e.g., symbols, maps, graphs, pictures, charts, equations, physical models etc)</li> <li>can use oral, written, and digital ways of communicating.</li> </ul>	
2. Contextualise the situation.	<ul style="list-style-type: none"> <li>localise the situation to meet the needs of the whānau, community hapū and iwi.</li> <li>identify socio-cultural assumptions underpinning the various contexts/situations.</li> <li>identify the values and attitudes that influence pāngarau decisions.</li> <li>identify relevant tikanga and mātauranga elements.</li> </ul>	
3. Fluently and flexibly solving problems that require operations on numbers, understanding the relative size of those numbers, making sense of the answer, and recognising the degree of precision required for the context.	<ul style="list-style-type: none"> <li>choose an appropriate approach to calculation (written, mental or digital)</li> <li>work with whole numbers to billions, fractions, decimals to three places, percentages, and integers.</li> <li>solve problems include commonly encountered rates, ratios, and powers.</li> <li>work with simple interest</li> <li>calculate averages (including the mode and median).</li> </ul>	<ul style="list-style-type: none"> <li>multiplying and dividing fractions</li> <li>negative and fractional exponents</li> <li>properties of exponents</li> <li>reverse percentage problems</li> <li>compound interest.</li> </ul>
4. Recognise and work with mathematical relationships.	<ul style="list-style-type: none"> <li>work with linear relationships that are represented as graphs or word rules</li> <li>recognise unknown values for a given relationship.</li> </ul>	<ul style="list-style-type: none"> <li>non-linear and exponential functions</li> <li>step functions (e.g. parking rates).</li> </ul>
5. Understand and use spatial features and representation of objects.	<ul style="list-style-type: none"> <li>recognise symmetry and transformation</li> <li>transform objects to design for purpose (e.g., enlarge, reflect, rotate, and translate)</li> <li>make connections between representation of objects in simple 2D and 3D.</li> </ul>	<ul style="list-style-type: none"> <li>working with cross-sections.</li> </ul>
6. Understanding and using systems to navigate, position and orientate themselves.	<ul style="list-style-type: none"> <li>have a way to navigate between points</li> <li>describe position and orientation in situations that are flexible in the system being used</li> <li>use 4-point and 8-point compass directions</li> </ul>	<ul style="list-style-type: none"> <li>using 16-point compass directions (e.g. SSW)</li> <li>bearings.</li> </ul>
7. Use numbers and units to measure and express attributes of objects as quantities, to a degree of precision appropriate to the context.	<ul style="list-style-type: none"> <li>use and interpret results of the measurement (including timetables and time charts)</li> <li>select appropriate units and convert between metric measures for the same attribute.</li> <li>solve measurement problems in practical contexts                             <ul style="list-style-type: none"> <li>perimeter</li> <li>volume (cuboids only)</li> <li>area (rectangles, parallelograms, triangles)</li> <li>mass</li> <li>temperature.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>measurements associated with circles.</li> </ul>
8. Understand and reason with statistics and data.	<ul style="list-style-type: none"> <li>recognise, and use appropriate data displays to investigate questions or claims for summary, comparison, and simple time series situations</li> <li>interpret data displays using features such as spread, clustering or frequency, centrality, and unusual pieces of data</li> <li>evaluate statements and representations based on data that is provided to them.</li> </ul>	<ul style="list-style-type: none"> <li>sampling</li> <li>sample to population inference</li> <li>reasoning with mean as a statistical measure of central tendency.</li> <li>gathering and organising data.</li> </ul>
9. Use probability to interpret situations that involve elements of chance.	<ul style="list-style-type: none"> <li>recognise and interpret everyday probabilities such as chance, simple risk, and odds</li> <li>use the language of probability to describe outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>doing experiments and comparing with theoretical models.</li> </ul>