

## Pangarau – Glossary

English	Maori
2-digit	matirua
2-dimensional	ahu-2
2-dimensional linear equations	whārite-rārangi ahu-2
2-dimensional representation	whakaahu-2-tanga
3-digit	matitoru
3-dimensional	ahu-3
abacus	takatātai
absolute numbers	tau pū
abstract thought	whakaaro waitara
acceleration	whakaterenga waka
acceleration	whakaterenga
accompanying information	kōrero tāpiri
activity	hohe-ā-ringa
airline timetables	tūtohi wā rerenga
algebraic expression	kīanga taurangi
algebraic fractions	hautanga taurangi
algebraic pattern	tauirā taurangi
algebraic transformation	panoni taurangi
algorithm	hātepe
alternate	tauwhiti
altitude	teitei
amazing square	tapawhā mīharo
amount of flooring	rahinga papa
analogue	ringarua
analogue time	wā ringarua
analyse	tātari
angle bisector	weherua koki
angle properties	āhuatanga koki
answer	otinga
anti-clockwise	kōaro
anti-clockwise	kōaro kē
anti-differentiation	kimi pārōnaki kōaro
apply	whakahāngai
apply strategy	whakahāngai rautaki

appropriate data	raraunga hāngai
appropriate data measures	ine raraunga e tika ana
approximate	whakaawhiwhi
approximate reasonableness	whai takenga
arc	pewa
area	horahanga
arithmetic or geometric sequence or series	raupapa tāpiri, whakarea, tapeke
arrow diagram	hoahoa pere
as long-run frequency	hei auau wā roa
aspects	tohu whakaatu
assertion	tāpaetanga kōrero
assessment	aro matawai
asymptote	rārangi pātata
attitude survey	hōpara waiaro
attitude survey	rangahautanga waiaro
averaging	kimi tau waenga
axis	tuaka
axle	uehā
balance	pūrere whārite
bar graph	kauwhata
based on	takea
basic fact	meka matua
basic multiplication facts	meka whakarau matua
basic operation	paheko matua
basic term	ariā matua
bearing	ahunga
bias	mānihi
bi-modal	tuari tihirua
binomial	huarua
binomial distribution	tuaritanga huarua
bi-variate	taurangi-rua
board game	tauwhāinga
box and whisker graph	kauwhata kauamo
bracket	taiapa
by practical means	whakaatu-ā-ringa
calculate	tātai
calculate sample statistics	tātai tauanga tīpako

calculation	tātaítanga
calculation table	tūtōhi tātai
calculations involving addition	tātaítanga tāpiri
calculations involving substration	tātaítanga tango
calculator	tātaítai
calculus	tuanaki
capacity	kītanga
categories	huínga raraunga
categories	huānga
categorise	whakarōpū
centre	pūnga
certain	āe ka tino taea
chance of rain	tūponotanga tērā ka ua
change	wāwāhanga moni
change	whiti
changes in populations over time	taurangitanga taupori i roto i te wā
chart	tūtōhi
check	tiro tiro
chi/essence	ngao
chothes pegs	rawhi
circle	porohita
classify	whakarōpū
cluster	rāpoi
coathanger	whakairi kaka
coin	uka
co-interior	tauroto
combining	whakamahi tahi
common multiples	taurea pātahi
compare	whakatairite
comparison	whakaritenga
comparison of variables	whakatauritenga taurangi
comparison problems	rapanga whakarite
compass	kāpehu
complex numbers	tau hiato
composite	hiato
composite bar graph	kauwhata pou hiato
computer software	pūmanawa
conditional probability	tūponotanga whakawhirinaki

cones	koeko
confidence intervals (margins of error)	pae hapa
conic section	motupae koeko
conjunction	tāpaetanga kōrero
consolidate	whakapakari
constructed	ka taea te mahi
context	horopaki
continue	whakahoki
continuing	mutu-kore
conventional	aronga whānui
conventional time series	tapeke raupapa houanga
conventions for the order of operations	tikanga whakaraupapa paheko
convergence	pūtahitanga
convert	whakawhitiwhiti
co-ordinate	taunga
cornflakes	kāngarere
corresponding	taurite
cube	mataono
cubic metre	mita pūtoru
cubic centimetre	mita-rau pūtoru
cubic decimetre	mita-tekau pūtoru
cuboids	mataono
cumulative effect	pānga tapeke
curve	ānau; kōpiko [IC]
cylinder	rango
dart	teka
data	raraunga
data display	whakaari raraunga
data display	whakaari
data distribution	tuaritanga raraunga
data measurement	inenga raraunga
data set	huinga raraunga
decimal	tau-ā-ira
decimal integers	tōpū-tau-ā-ira
decimal number	tau-ā-ira
decimal place	mati whaiira
decimal points	tau-ā-ira
deck	pūranga

deficit	tūwhene
describe	whakaahua
design	hoahoa
develop	whakapakari
develop a concept	whakapakari i ngā whakaaro
diagonal	hauroki
diameter	whitianga
different perspective	aronga kē
differential equation model	taura whārite pāronaki
differentiation	pāronaki
differentiation	āputa
digit	mati
digital time	wāmati
direction	ahunga
direction	anga
discontinuity	āputa
discount	whakahekenga utu
discrete and continuous numeric data	raraunga tau mowaho, tau whaiwhai
discrete number	tau mowaho
discrete numeric data	raraunga tau mowaho
discuss	matapae
discuss	āta whiriwhiri
discuss	matapaki
discuss situations	pūāhua
disinfectant	patuhuakita
display category data	whakaatu raraunga whakarōpū
distinctive feature	āhuatanga kōhure
distortion	whakapekatanga
division	whakawehenga
dot graph	kauwhata ira
dot plot	kauwhata
doubled	kopi
draw	tuhi
elements	huānga
ellipse	pororapa
enlargement	whakarahinga
environmental issues	kaupapa taiao
equation	whārite

equation	whārite rārangi
equation formula	tauirā whārite
equivalence	ōrite
equivalence	inenga ōrite
equivalent ratio	ōwehenga tairite
estimate	whakatau
estimate	whakatau tata
evaluate	arotake
evaluate	tātari
even numbers	he taurua
event	pāpono
everyday situations	pūāhua whaitake
exclusive and independent events	pāpono tāuke, motuhake hoki
expand	whakawhānui
expected	whakapaetia
expected values	uara e whakapaetia
experiment	whakamātau
experimental situation	pūāhua whakamātau
exponent	taupū
exponential	pūtanga
exponential function	pānga taipū
exponential function	pānga whakarūnā
exponential rate	pāpātanga taipū
expression	kīanga
face value	te uara mati
fact	meka
factor theorem	tauwehe
factorise	whakatauwehe
fathom	mārō
fiction	pakimaero
figurate numbers	tau tongi
find by inspection	kimi-ā-kanohi
finite	mutu-mārika
flexibility	wairua tāwari
fold	whētui
formulae	tauirā
fraction	hautau
frequency	auau

frequency table	tūtohi auau
frequency table	papatau auau
function	pānga
games	tauwhāinga
games of chance	tauwhāinga whai tūponotanga
general rule	ture whānui
generalise	whakawhānui
generate a pattern	hanga tauira
geometric pattern	tauira āhuahanga
geometry	āhuahanga
gift-wrapping	takai tākoha
golden rectangle	tapawhā hāngai kōura
gradient	rōnaki
gradient function	pānga rōnaki
graph	kauwhata
graphical technique	tikanga kauwhata
grid paper	pepa tukutuku
grids	tukutuku
GST	tāke hokohoko
half	haurua
highlight	whakatairanga
histogram	kauwhata pouhere
hyperbola	pūwerewere
identify	tautuhi
illustrated	whakaaritia
imaginary events	pāpono whakatau
impossible	e kore e taea
inconclusive	taurerewa
inequation	tōrite
inferences	whakapae
infinite	mutu-kore
inflation	pikinga utu
informal relation	hononga ōpaki
informal relationships	hononga ōpaki
instrument	taputapu
integer co-ordinate system	pūnaha taunga tau
integers	tau tōpū
integral	tōpū, pāwhaitua

integration	kimi pāwhaitua
integration	pāwhaitua
intercept of lines	rārangi haukoti
intercepts	haukoti
interior and exterior angles	koki o roto, o waho
interpret	whakamāori
intersected	haukotitia
invariant	pūmau
invariant properties	āhuatanga pūmau
inverse function	pānga kōaro
investigate	whiriwhiri
investigate	hōpara
investigation	hōparatanga
involvement	whai wāhi
involving	whai wāhi
irrational	whakahau-kore
irrational numbers	whakahau-kore
irregular	hikuwaru
isocles triangle	tapatoru waerite
isometric drawing	hoahoa āwhata
justify	parahau
lateral thinker	whakaaro tihoi
least likely	tērā e kore e taea
letter	pū
like terms	taurangi tairite
limit	tepe
limitations	hapa
limitations	aukati
linear equation	whārite rārangi
linear function	pānga rārangi
linear number patterns	tauirā rārangi
linear patterns	tauirā rārangi
linear rules	ture rārangi
linoleum	kahupeka
local	paetata
locus	huanui
log-log	tau pū kōaro
long-term	mauki



long-term	rangitahi
make adjustments	me paku whakarerekē
make conjectures	tāpae whakaaro
make conversions	whakawhiti
make statements	tāpae whakaaro
manipulate	whawhenga
manipulate	whawhe
manipulation	whawhenga
mark-up	whakapikinga utu
mass	papatipu
materials	papanga
mathematical exploration	torotoro-ā-pāngarau
mathematical formulae	tauirā pāngarau
maximum	tihi
mean	tau toharite
measurements of length	inenga roa
measures of central tendency	ine ahūwaenga
measuring devices	pūrere ine
media	pāpāho
median	weherua tapatoru
median	tau waenga
mediator	rārangi weherua hāngai
mentally	ā-hinengaro
menu	rārangi kai
methodology	tikanga
metric systems	pūnaha ngahuru
metric unit	waeine ngahuru
millilitre	rita-mano
minimum	mōkito
minimum	whāruarua
mixed	hanumi
mode	tānui
mode	tau tānui
model	tauirā
model	whakatauirā
most likely	ka tino taea
movement	nekenga
multiplication	whakarau

multiplication	whakaraunga
music	pūoro
negative number	tau tōraro
negative scale factors	tau rahi tōraro
net	raumata
network	rauara
non-electronic	tāhiko-kore
non-linear equations	whārite rārangi-kore
non-square grids	tukutuku tapawhā-kore
non-standard	aronga kē
non-standard measurement	waeine aronga kē
normal distribution	tūaritanga māori
normals	hāngai pātapa
note	tāra
number line	rārangi tau
number operation	paheko tau
number patterns	tauirā tau
number sentence	rerenga tau
number series	raupapa tau
number story	pakitau
number system	pūnaha tau
numerical methods	tikanga tau
object	taonga
object	papatipu
odd numbers	taukehe
oil spillage	tāhoro hinunuku
operation	paheko
opinions	huatau
optimal solution	whakaotinga
optimal solutions	whakaotinga tino tika
ordered pictures	whakaahua raupapa
ordinary form	tau noa
orienteeing	tiawhe ararau
original	ake
outcome	hua
outlier	mowaho
over time	i roto i te wā
overhead projector	rauata

parabola	unahi
parallel	whakarara
parallelogram	whakarara
parallelograms	tapawhā whakarara
passage of time	takanga o te wā
pattern	tauira
pentominoes	tapawhā-rima
percentage	ōrau
perimeter	pae
perimeter	paenga
perpendicular	hāngai
physical situation	pūāhua tūturu
pictographs	kauwhata whakaahua
pie graphs	kauwhata porohita
piece-wise	manunu
place value	uara tü
place value blocks	poronga uara tü
plan statistical investigation	whakarite hōpara tauanga
plane	tukutuku
planets	aorangi
planks	wāwāhanga papa
plastic	kirihou
point	pūwāhi
point of inflection	wāhi tupa
points on scale	tauwhata
polar co-ordinates	taunga pākoki
polygon	taparau
polyhedron	matarau
population	taupori
population mean	tau toharite taupori
population parameters	tawhā taupori
porridge	pākū
position	takotoranga
positive	tōrunga
positive integer	tau tōrunga
possible	āe ka taea
power	pū
practical activities	hohe-ā-ringa

practical contexts	horopaki whitake
practical problems	hopanga tüwaenga
practical problems	rapanga whitake
practical situation	püähua whitake
practical work	mahi whitake
predict	matapae
prediction	matapae
prism	poro
probability	tüponotanga
problem	rapanga
problem-solving	whakoti rapanga
prominent	köhure
proportion	öwehenga
proportional	öwehe
protactor	inekoki
prove	häpono
put in order	whakaraupapa
pyramid	koeko tapatoru
quadratic	pürua
quadratic equation	whärite pürua
quadratic sequence	raupapa pürua
qualitative data	raraunga kounga
quality control	whakaü kounga
quantity	wähanga
quantity	rahinga
quartiles	hauwhätanga
radian measure	ine tätoro
radius	pütoro
random number generator	hanga whakaputa tau tupurangi
random survey	höpara tupurangi
range	whakatüturu
rate	päpätanga
rate of change	päpätanga o te whiti
ratio	öwehenga
rational	whakahau
rational numbers	tau whakahau
raw data	raraunga ake
real	tüturu

real data	raraunga tūturu
real situation	pūāhua tūturu
rearrange	whakawhiti
reasonableness	whai takenga
reciprocal function	huri kōaro
recognise	āhukahuka
rectangular co-ordinates	taunga kauwhata
reduce	whakaiti
reference sources	matatiki whai tikanga
reflect critically	titiro arorau
reflection	whakaatanga
reflection	whakaata
reflection symmetry	hangarite whakaata
reflections	ataata
regular polygon	taparau rite
regular tessellation	korowai rite
relations	hononga
relationship	pānga
relationships	hononga
relationships between variables	hononga taurangi
relevance	pānga
remainder theorem	ture toenga
repeat	whakahoki
repeated	whakhokia
repeating	tāruarua
repeating geometric patterns	tauirā āhuahanga tāruarua
report	pūrongo
represent	whakaari
represented	whakaatuhia
requiring	whakahau
results	otinga
right angled	koki hāngai
rotation	hurihanga
rotation	hurihuri
rotational symmetry	tauirā hangarite huri
rote count	tatau-ā-kākā
round	whakaawhiwhi
rule	ture

ruler	rauru
sample	tīpako
sample means	tau toharite
sample results	otinga o tētahi tīpako
sample selection	kōwhiri tīpako
scale	āwhata
scale drawing	whakaahua āwhata
scale drawing	hoahoa āwhata
scale factor	tau rahi
scale map	mahere āwhata
scale map	āwhata
scalene	tapatoru (hikuwaru) [??]
scales	āwhata
scatter diagram	kauwhata marara
scatter plot	kauwhata marara
sector	wāhanga porohita
semi-circle	porohita weherua
semi-log	tau pū huri kōaro
semi-regular	āhua rite
sense of personal achievement	koanga mata whaiaro
sequence	kīanga
sequence	raupapa
sequence of events	raupapa pāpono
sequential	raupapa
sequential pattern	tauirā raupapa
series	tapeke raupapa
series	tapeke
set	huinga
set of similar problems	huinga rapanga tairite
sewing fabric	papangarua
shade in	whakakauruku
shadows	ātārangi
share quantities	tohatoha rahinga
sheet	tawhera
short-term	rangitahi
short-term	matatiki
show	whakaatu
significant	tāpua

significant features	āhuatanga tāpua
significant figures	mati tāpua
simple time-series data	raraunga tapeke raupapa houanga māmā
simplify	whakarūnā
simulate	whakatau
simulate situations	whakatau pūahua
simulated	whakatau
simulated problems	rapanga tūturu
simulation	whakatau
simultaneous	tukutahi
simultaneous equations	whārite tukutahi
sine rule	ture aho
situation	pūahua
situations that give rise to predictable probabilities	pūahua ko ōna tüponotanga e taea ana te matapae
sketch	tā
skewed	tītaha
slope	rōnaki
social context	horopaki pāpori
solid object	papatipu
solve practical problems	whakaoti rapanga whaitake
solve problems	whakaoti rapanga
source	takenga
space	mokowā
spatial sequence	raupapa
special properties	āhuatanga motuhake
specify	tautuhi
sphere	poi
spirals found in nature	tōrino ā-nuku
spread	horahanga
spreadsheet	ripanga
sprial	tōrino
square	tapawhā rite
square roots	pūtake rua
squaring	pūrua
stained-glass window	matapihi whaikano
stalagmite	koeko
stall	tauhekohoko

standard	aronga whānui
standard deviation	ine mahora
standard form	tānga ngahuru
standard normal form	tūaritanga māori pūtahi
statistical investigation	ngā hōpara tauanga
stem and leaf graph	kauwhata rau-tō
story problems	rapanga paki
strand	aka
strategy	rautaki
strengthen	whakapāuaua
string games	whai
strip graph	kauwhata tāhei
structured situation	āhuatanga kua whakaritea
substitute	whakauru
substitution rule	tikanga whakauru
sum	tapeke
sum	tōpūtanga
sum of money	tōpūtanga moni
surplus	tarepa
symbol	tohu
symbols of comparison	tohu whakarite
symmetric	hangarite
symmetry	hangarite
symmetry and angle properties	āhuatanga hangarite me ngā āhuatanga koki
system	pūnaha
systematic	nahanaha
systematic approach	huarahi nahanaha
table	tūtahi
table	papatau
tables of multi-variate data	papa raraunga taurangi-rau
tally chart	tūtōhu tatau
tangent	pātapa
tangents to a circle	pātapa porohita
temperature	mahana
tent	whare
tessellation	korowai
theoretical probability	tūponontanga pāngarau



third	hautoru
thrifty	penapena
time series	tapeke raupapa houanga
time series data	raraunga tapeke raupapa houanga
time zones	rohe wā
timeline	rārangi takawā
time-related variation	taurangitanga houanga
timetable	wātaka
to round	whakaawhiwhi
to specified requirements	kia hāngai ai te āhua ki tērā i whakaritea
total	tapeke
total value	te uara tapeke
traditional game similar to draughts	mū tōrere
transformation	panoni
translation	nekehanga
trapezia	taparara
trapezium rule	ture taparara
tree diagram	hoahoa rākau
trends	ia mauki
triangular-based pyramid	koeko tapatoru
trigonometric	pākoki
trigonometric ratio	ōwehenga pākoki
trigonometrical expression	kīanga pākoki
trigonometrical ratio	ōwehenga pākoki
triples	kāhui tau-toru
two-digit whole numbers	tau oti matirua
uncertainty	kotiti
understanding	orotau
unit of measurement	waeine
unit of time	waeine takanga wā
unreliability	hārakiraki
upper echelons	huarewa
use	whakamahi
using a cylinder	whakamahi rango
value	uara
variables	taurangi
variable of interest	taurangi whai tikanga
variation over time	taurangitanga houanga

variations of variables	taurangitanga kē
variations over time in continuous processes	taurangitanga tukanga mutu-kore i roto i te wā
vector	pere
vertex	akitu
vertices	akitu
volume	rōrahi
volumes of cuboids	rōrahi mataono
watch	matawā
weather	huarere
whole	katoa
whole number	tau oti
whole number grid	tukutuku tau oti
whole number variables	taurangi tau oti
whole object	taonga tūtahi
winning	ukauka