Kirkcaldy High School Mathematics Department

National 5 APPLICATIONS Revision Guide 2022-23

NOTE: SCALE DRAWING, PLANNING A NAVIGATION ROUTE AND LINE OF BEST FIT WILL NOT BE ASSESSED THIS YEAR!

Exam Length:
Paper 1 (Non-Calculator) 50 minutes
Paper 2 (Calculator) 1 hour 40 minutes

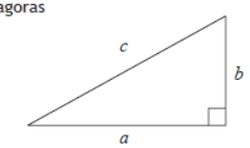
Formula List given in assessments

FORMULAE LIST

Circumference of a circle $C = \pi d$

Area of a circle $A = \pi r^2$

Theorem of Pythagoras



$a^2 + b^2 = c^2$

Volume of a cylinder $V = \pi r^2 h$

Volume of a prism $V = Ah$

Volume of a cone $V = \frac{1}{3}\pi r^2 h$

Volume of a sphere $V = \frac{4}{3}\pi r^3$

Standard deviation $s = \sqrt{\frac{\Sigma(x-\bar{x})^2}{n-1}}$

or $s = \sqrt{\frac{\Sigma x^2 - \frac{(\Sigma x)^2}{n}}{n-1}}$, where n is the sample size.

Gradient

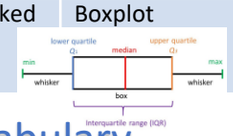
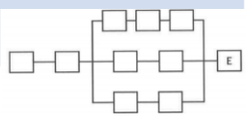
$$\text{gradient} = \frac{\text{vertical height}}{\text{horizontal distance}}$$

Study Timetable

W/B	Tasks
2nd/9th/ 16th Jan	Prelim Revision – SQA Questions by Topic booklet and past papers 2019 and 2022 (not scale drawing, navigation routes and line of best fit).
23rd Jan	Numeracy Past Paper Qs.
30th Jan	Finance Past Paper Qs.
6th Feb	Statistics Qs.
13th Feb	Measurement Qs.
20th Feb	Geometric Qs.
27th Feb	Full paper 2014.
6th Mar	Full paper 2015.
13th Mar	Full paper 2016.
20th Mar	Full papers 2017 and 2018.
27th Mar	Full papers 2019 and 2022.
3rd/10th Apr	Extra practice papers provided on MS Teams.
17th/24th Apr	Focused Past paper revision on areas for development.
1st May	SQA National 5 Applications Exam Thursday 4th May at 9am

DO NOT WRITE ON THE PAST PAPERS!
WRITE ON SEPARATE PAPER SO THAT YOU CAN COMPLETE QUESTIONS MORE THAN ONCE!

Formulae you need to remember

Percentage Increase/decrease	$\frac{increase\ (or\ decrease)}{original\ amount} \times 100$
Speed/Distance/Time	$D = ST$ D = Distance S = Speed T = Time
Area pf a rectangle	$A = lb$ l = Length b = Breadth
Area of a triangle	$A = \frac{1}{2}bh$ b = Base h = Height
Volume of a cuboid	$V = lbh$
Gross and Net Pay	$Net\ Pay = Gross\ Pay - Deductions$
Foreign Exchange GBP -> other currency Other currency -> GBP	When exchange rate is £1 = other currency $Amount\ in\ GBP \times Exchange\ Rate$ $Amount\ in\ other\ currency \div Exchange\ Rate$
Probability	$P(Event) = \frac{Number\ of\ Desireable\ Outcomes}{Total\ Number\ of\ Possible\ Outcomes}$
Tolerance	E.g. $20 \pm 10\%$ Maximum = 20 + 10% = 22 Minimum = 20 – 10% = 18
Averages	$Mean = \frac{Sum\ of\ all\ data\ points}{Quantity\ of\ all\ data\ points}$ $Mode = Data\ point\ that\ occurs\ most$ $Median = Middle\ value$ (data points in size order) $Range = Largest - smallest\ value$
Interquartile Range	$Q_3 - Q_1$
Finding the angle in the pie chart	$Angle = \frac{Quantity\ in\ category}{Total\ number} \times 360$
Charts you may be asked to draw	Boxplot  Pie Chart  Precedence table 

Past Papers by Topic

Note: Any questions with **NA** will not be assessed this year.

	Lifeskills 2014		Lifeskills 2015		Lifeskills 2016		Lifeskills 2017		Apps 2018		Apps 2019		Apps 2022	
	P1	*P2*	*P1*	*P2*	*P1*	*P2*	*P1*	*P2*	*P1*	*P2*	*P1*	*P2*	*P1*	*P2*
Numeracy	5	4,6	1,2,5	1,6a,b	3	1,2,6c,8a,b	6	5b,7c	5,6,8,9,10	1,4b,5a,6,9d	6,10,11,12,13	1,4,10b	2,8	4b/c,5b,6b/c/d
Finance	4,8	2,4,5b,7	5,6,9,10b	3,4c	1,4,6,7	7,8b	2,7b	2,3,5c,6b	2,7,8	1,3,8a,b,10,11b	2,5	1,3,4,6,9d,10c	6,10	1,3,5d,6a
Statistics	1,7	1		5	2	3,6a,b	3(NA),5,8	4,5d,7a,b	3(NA),14	2,4a,8c	3,7	7a/b, 7c(NA),9a	3,4,5,12	2,4d,5a
Measurement	2,6	3(NA)	1,2,3,4,8	2, 4a/b(NA)	3,5	2, 4a/b(NA), 4c	1	5a(NA), 6a,7c	1,4,9, 12(NA)	7,9a,b,d	1,4,9	9b,c	1	4a,5c
Geometric	3,9	5a,7	7,8,10a	1,2,3,6c	6,8,9,10	8c	4,7a,9	1,8	11,13,15	5b,9c,11a,c	8(NA)	2,5,8,10a	7,9,11	7

Finance Vocabulary

Basic Pay	A standard rate of pay before additional payments.
Gross Pay	Pay you earn before deductions.
Net Pay	Pay you take home after deductions.
Deductions	Amounts deducted from your pay before you receive it, e.g. income tax, pension, student loan, national insurance.
Bonus	Additional pay for doing well at work.
Commission	Extra pay based on sales made (often a percentage of the amount).
National Insurance	State contributions towards a fund from which state benefits are paid. Amount paid is based on pay/salary.
Income Tax	Government contributions to pay for public services. Amount paid is based on pay/salary.
Pension	A regular payment to a fund for retirement.