Stage 9 2022-23						
	Autumn Term		Spring Term		Summer Term	
	1	2	1	2		

	between truncatn" and roundin" 31, 32, 90 1% • Identfy t!e minimum and ma+imum values of an amount t!at !as been rounded (to nearest +1 + d8p81 + s8f8)132, 206 1.-1% • se ine#ualites to describe t!e ran"e of values for a rounded value 132, 206, 155 1.-1% ;olve problems involvin" t!e ma+imum and minimum values of an amount t!at !as been rounded 132, 206 1.-1% 2C • Identfy if a	identty 137 @1 • ;implify an e+pression involvin" 5+'6 by collectn" li2e terms 33 -1 • Identfy w!en it is necessary to remove factors to factorise a #uadratc e+pression 94 -%--7 • Identfy w!en it is necessary to 4nd two linear e+pressions to factorise a #uadratc e+pression -7--@ •)actorise a #uadratc e+pression of t!e form +A B b+ B c 157, 192 -7--@ • 3now !ow to set up an mat!ematcal	• ,alculate t!e arc len"t! of a sector w!en radius is "iven 118 /-&-/%$ foundaton boo2 • 3now !ow to 4nd t!e area of a sector 167 /-&-/%$ foundaton boo2 • ,alculate t!e area of a sector w!en radius is "iven 167 /-&-/%$ foundaton boo2 • ,alculate t!e an"le of a sector w!en t!e arc len"t! and radius are 2nown 167 /-&-/%$ foundaton boo2 • 3now !ow to 4nd t!e surface area of a ri"!t prism (cylinder)	m+ B c to identfy parallel lines 159a 13%-137 • (earran"e an e#uaton into t!e form y < m+ B c 159a 13%-137 • Interpret t!e "radient of a strai"!t line "rap! as a rate of c!an"e 216b 1%/-1%- • Clot "rap!s of #uadratc (cubic1 reciprocal) functons 98, 161 1.3-1-$ • (eco"nise and interpret t!e "rap!s of #uadratc (cubic1 reciprocal) functons98, 161 1.3-1-$ • ;2etc! "rap!s of #uadratc (cubic1 reciprocal) functons 98, 161	• ;et up and solve a tri"onometric e#uaton to 4nd a missin" side in a ri"!t-an"led trian"le 168 /-&-/%1 • ;et up and solve a tri"onometric e#uaton w!en t!e un2nown is in t!e denominator of a fracton168 /-&-/%1 • ;et up and solve a tri"onometric e#uaton to 4nd a missin" an"le in a ri"!t-an"led trian"le 168 /-&-/%1 • se tri"onometry to solve problems involvin" bearin"s168 /-&-/%1 se tri"onometry to solve problems	a line from a point (at a point) 146a, 146b /.%-/-$ • nderstand t!e meanin" of locus (loci) 165 /-/-/-3 • 3now !ow to construct t!e locus of points a 4+ed distance from a point (from a line) 165 /-/-/-3 • ,!oose tec!ni#ues to construct /'s!apes7 e8"8 r!ombus • ,ombine tec!ni#ues to solve more comple+ loci problems 165 /-/-/-3 • 3now !ow to deal wit! a c!an"e in dept!

	fract on is termina tn" or recurrin" N32 56-59 • (ecall some decimal and fract on e#uivalents (e8"8 tent!s1 4D!s1 ei"!t!s) N32 57-58 • E rite a decimal as a fract on N32 59 • E rite a fract on in its lowest terms by cancellin" common factors N23c 42 • Iden t fy w!en a fract on can be scaled to tent!s or !undredt!s N32 • ,onvert a	ar"ument • E or2 out w!y two al"ebraic e+pressions are e#uivalent @1 • ,reate a mat!ema tcal ar"ument to s!ow t!at two al"ebraic e+pressions are e#uivalent @1 •				

	fracton to a decimal by scalin" (w!en possible) N32 57-59 • se a calculator to c!an"e any fracton to a decimal N44 56-57 • Erite a decimal as a percenta"e N32 77-80 • Erite a fracton as a percenta"e N32 77-80 • (eco"nise w!en a fracton (percenta"e) s!ould be interpreted as a number • (eco"nise w!en a fracton	e#uatons 162 1$%-1$& • Interpret t!e soluton to a pair of simultaneous e#uatons 1$%-1$& • ;olve a #uadratc e#uaton of t!e form *x*A B *bx* B *c* by factorisin" 157 @& • ;olve a #uadratc e#uaton of t!e form *ax*A B *bx* B *c* by factorisin" 157, 192 @@ • ;olve a #uadratc e#uaton by rearran"in" and factorisin"	• ,alculate an estmate of t!e mean from a "rouped fre#uency table, 130b 33&-33@ • 9stmate t!e ran"e from a "rouped fre#uency table 130a, 130b 33&-33@ • Analyse and compare sets of data 62 33@ • Appreciate t!e limitatons of di:erent statstcs (mean1 median1 mode1 ran"e) 62 33@ • ,!oose appropriate statstcs to describe a set of data 62 33@ Iustfy c!oice of statstcs to	G4b 3$/-3$. •)ind and name t!e e#uaton of t!e mirror line for a "iven reFecton 3$/-3$. • 'escribe a translaton as a /' vector G5 3$7-3$& • nderstand t!e concept and lan"ua"e of rotatons G6 3$.-3$% • ,arry out a rotaton usin" a "iven an"le1 directon and centre of rotaton G6 3$.-3$% 'escribe a rotaton usin" mat!ematcal lan"ua"e G6 3$.-3$%	direct (inverse) proportion situaton 199 @/-@% • nderstand t!e connecton between t!e multplier1 t!e e+pression and t!e "rap! • 3now t!e meanin" of con"ruent (similar) s!apes 12b, 144 31&-3/1 • Identfy con"ruence (similarity) of s!apes in a ran"e of situatons 12b, 144 31&-3/1 • Identfy t!e informaton re#uired to solve a problem involvin" similar s!apes 144 31&-3/1	

	(percenta"e) s!ould be interpreted as a operator • Iden t fy t ! e mul t plier for a percenta"e increase or decrease w ! en t ! e percenta"e is "reater t ! an 1$$J R9b 81 • se calculators to increase an amount by a percenta"e "reater t ! an 1$$J R9b 81-82 • ;olve problems involvin" percenta"e c ! an"e 109 83-84 • ;olve ori"inal value	157, 192 @@ • Iden t fy w ! en a #uadra t c e#ua t on cannot be solved by factorisin" 191 • Ma2e connec t ons between "rap ! s and #uadra t c e#ua t ons of t ! e form *ax*A B *bx* B *c* < $ 1%%-1%@ • Ma2e connec t ons between "rap ! s and #uadra t c e#ua t ons of t ! e form *ax*A B *bx* B *c* < *dx* B *e* 1%%-1%@)ind appro+imate	describe a set of data 62 33@		)indin" missin" len"t ! s in similar s ! apes 144 31&-3/1	

	problems w!en wor2in" wit! percenta"es 110 85 • ;olve 4nancial problems includin" simple interest 111 86-87 • nderstand					

		dia"ram to calculate probabili t es of independent combined events 151,175 37--37% • se a tree dia"ram to calculate probabili t es of dependent combined events 151,175 37--37@ nderstand t!at rela t ve fre#uency tends towards t!eore t cal probability as sample siHe increases 3%&-3%@				
Assessment	.eacher8Ass. .est 6nit tests	9.1 E:A% 6nit tests	.eacher8Ass. .est 6nit tests	9.2 E:A% 6nit tests	.eacher8Ass. .est 6nit tests	9.& E:A% 6nit tests

Curriculum Area: Math			
!ub"ect:			
#ear Gr$u%	&a ic '($) er Abilit* +, - .$i, t /	Clear 'Mi--le Abilit* +, - .$i, t /	0etaile- '1i2her Abilit* +, - .$i, t /
	t!eir own8	appreciate t!e di:erence between	

; hy this< ; hy no4<	%athematics is an interconnecte5 sub=ect in 4hich pupils nee5 to be able to mo"e >uently bet4een representations o/ mathematical i5eas. .he programme o/ stu5y /or ?ey stage & is organise5 into apparently 5istinct 5omains@ but pupils shoul5 buil5 on ?ey stage 2 an5 connections across mathematical i5eas to 5e"elop >uency@ mathematical reasoning an5 competence in sol"ing increasingly sophisticate5 problems. .hey shoul5 also apply their mathematical ?no4le5ge in science@ geography@ computing an5 other sub=ects. .he structure is 5esigne5 to bri5ge bet4een K!2 an5 K!)@ buil5ing both 4ithin an5 bet4een ?ey topic areas. .he structure also buil5s the complexity le"els 4ithin topics an5 gi"es a greater "ariation in the challenge gi"en to pupils.
!?ills & Characteristics	Resilience upils 4ill increase their resilience 5uring the course through learning ne4 concepts@ using prior ?no4le5ge to 5e"elop mathematical >uency an5 applying s?ills to a "ariety o/ situations an5 problems. upils 4ill be challenge5 in all lessons an5 4ill sho4 that they ha"e learne5 /rom mista?es through a "ariety o/ tas?s inclu5ing connect exercises. .he challenge acti"ities 4ill ha"e the aim o/ 5e"eloping both s?ills an5 high aspirations in both this sub=ect an5 li/e beyon5. Aesilience 4ill also be 5e"elope5 4ithin the Key maths s?ills belo4 B>uency@ reasoning an5 problem sol"ingC. Collaboration upils 4ill be gi"en the opportunity to 4or? together to 5e"elop an5 share their i5eas on topics@ 5iscuss misconceptions an5 ho4 these topics can be use5 in real+li/e situations. Creativity upils 4ill 5e"elop creati"ity through a "ariety o/ problem sol"ing acti"ities 4ithin each topic@ 4or?ing on in5epen5ent tas?s beyon5 the classroom such as %angahigh acti"ities@ an5 apply the ?ey s?ills B>uency@ reasoning an5 problem sol"ingC. Skills Buil er C0%%6N$CA.$0N D ,istening & !pea?ingE upils are expecte5 to acti"ely listen so that they can /ollo4 instructions an5 pic? out misconceptions. B,$!.EN$N'C

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	!$tracurricular !tretch an5 challenge club Chess & games club (ome4or? club