



S MN MJ GA W R ? Q ? NMJ GA WRF ? R A ? J AS J
MP A CPR ? ? G L C Q C Q K G L R C Q M R R E B a
? Q Q C Q K C L R B M C Q L M R R ? I C N J ? A C G

Y
Y
Y
Y
Y
Y
P KP ? B C M

P KP ? B C M

P Q ? P C ? J J M U C B B S P G L E C V ? K G L ? R G M

hP ? LEA Ch

sM N MJ GA W	sM N MJ GA W
fMK NS B C ? P C B L ? R G M L ? J ? Q C B Q Q K B 2 R R O O A ? B K G L G G R & P C B C Q M 4 P 4 ? L B DC:	sM N MJ GA W
sM N MJ GA W	Y
mL E C L C P ? J 4 N P G K ? L P M R Q R S J B M U L C R B O R ? M P S C Q C A R C Q R O ? L B C V ? K G L ? R G M L O :	yA G C L R G D G A A ? J A S J ? R M P Q U G R F Q N C A G D 3 C B K M B C V ? K G L ? R G M L O D M P y C A M L B ? P W G Q K P ? B C a 2 : F C P C C V ? K G L ? R G M L O D M P y C A M L B ? P W E O K P ? B C U 2 y A F M M . N M J G C Q P C E ? P B G L E R F C S Q C M D B G E G R ? J B C T G A C A ? J A S J ? R M P Q ? P C ? J J M U C B B S P G L E Q A F M M J R C Q K ? R F C K ? R G C Q M M P ? ? P W J C T Y D E 2 Q K P ? B C R
sM N MJ GA W	sM N MJ GA W
f ? J A S J ? R M P Q ? ? M O C B B S P G L E R C Q R Q ? L B C	: F C S Q C M D A ? J A S J ? R M P Q ? L B A M K N S R C P 2 G Q N C F ? L B G O @ ? Q C B M L R F C R C ? A F C P Q) B G O A P C R G M L :
sM N MJ GA W : : F C P C ? P C P C D C P C L A C Q R M R F E C L C P ? J @ S R L M R O M K A R B G K R M K A 2 B R C Q R C V ? K G L ? R G M L O :	y R S B C L R Q ? P C N C P K G R R C B R M S Q C A ? J A S J ? R M P Q

Y

f ? J A S J ? R M P Q ? P C ? J J M U C B B S P G L E R C Q R G L E :

Exhibit 20: National Policies Regarding Use of Digital Devices in Mathematics Examinations

Reported by National Research Coordinators

2019

(Continued)

Country	National Policies Regarding Use of Digital Devices in Mathematics Examinations	
	Grade 4	Grade 8
1MC?, BCNI MD	' ODDCK CLRMDJ?FLGE E K ?FCK ?RQA?L NFMTC CBSCLROU GF MNMFLS QSRVSCC RCAF L MME Q?JRMMD G AJSBGE A?JASJPRMQ ANK NSRCPQ ?LB CBSA?RML?J QMDU?FC, BCNCLBGE ML FFCJ?FLGE ANLRLR?LB FFC K CFMBQMD?ODDCK CLR	9?K C?QDMP - P?BC Ž
1MVTM	4MNMJAW	Y
1SU?G	4MNMJAW	4MNMJAW
2?RQ	4MNMJAW	Y
2C@?LML	Y	4MNMJAW
2GFS?LG	4MNMJAW@SRNFK ?PVAFMJFC?AFCPQA?L SCC ANK NSRCPQ 'MPP@CRO' G FFCJ?FLGE NFMACD?RFFCPBGAPRMLI ; CC MD A?JASJPRMQ G NFK ?PVAFMJQ@L MRCAMK K CLBCB	4MNMJAW@SRCSBCLRO@CEG ANK NSJQMPW/ ANSFOCG - P?BC ž : C?AFCPQA?L SCC ANK NSRCPQ 'MPP@CRO' G FFCJ?FLGE NFMACD?RFFCPBGAPRMLI
3 ?JVOB	Y	' CQCAGJAGASJPMIL FFC SCC MDQAGL RBA A?JASJPRMQ G FFC OAFMMJ ?LB NS@JA CV?K G?RML F?Q@CCL BGR@SRCB RV?J CAFMMQ 9RSBCLRO ?FC MLJW?JMU CB RVSOC LMLNFMPEPK K ?@C OAGL RBA A?JASJPRMQ BSRGE CV?K G?RMLQ
3 ?JR	4MNMJAW	Y
3 MLRLCEPM	4MNMJAW	Y
3 MRAAM	9RSBCLRO?FC LMR?JMU CB RVSOC ?LWBGE QJ BCT@C BSRGE RCRQMP CV?K G?RMLQ	: FFC SCC MDLMLNFMPEPK K ?@C A?JASJPRMQ BSRGE CV?K G?RMLQ @ CMK CRK CQ?JMU CB
4 CRCP?LBQ	4MNMJAW	Y
4 CU >C?JLB	4MNMJAW: FFC SCC MDCAF L MMEWG B GASCCB ECLCP?JW@SRLMR CQCAG?JMU GF G FFC K ?FCK ?RQA?FC? MFFC ASPASJSK I	9?K C?QDMP - P?BC Ž
4 MFF 3 ?ACBMLG	4MNMJAW	Y
4 MFFCL /CJPLB	4MNMJAW?QFCFC ?FC LML?RML?J RCRQMP CV?K G?RMLQ G - P?BC ž	Y
4 MU?W	4MNMJAW	4MNMJAW
5 K ?L	4MNMJAW	4MNMJAW
6?I @RL	4MNMJAW	Y
6 FGBNECO	4MNMJAW?JFMS EF CBSCLRO?FC @?FFCB DMK SQGE RCAF L MMEWMA A?NSFC RCRCK QBSRGE L?RML?J CV?K G?RMLQ	Y
6 M?LB	4MNMJAW	Y
6 M?SE?J	4MNMJAW	4MNMJAW
7 ?RP	4MNMJAW	4MNMJAW
8MK ?LG	Y	9RSBCLRO?FC LMR?JMU CB RVSOC ?LWBGE QJ BCT@C BSRGE RCRQ?LB CV?K G?RMLQ
8SC@L , CBCP?RML	4MNMJAW	4MNMJAW
9?SBG P?@G	* G QJ BCT@C?FC LMR?JMU CB BSRGE RCRQ	9?K C?QDMP - P?BC Ž
9CP@G	4MNMJAW?QFCFC ?FC LML?RML?J RCRQMP CV?K G?RMLQ G - P?BC ž 9RSBCLRO?FC LMR?JMU CB RVSOC ?LWBGE QJ BCT@C BSRGE RCRQMP?J CV?K G?RML, U GF FFC CVA CNRML MD CSBCLROU GF G BGTBS?J CBSA?RML?J NPLQ	Y
9GE?NMC	4MNMJAW) ?JASJPRMQ?FC G FMSACB MLJW?DRCP - P?BC ž	4MNMJAW
9JT?I BCNS@JA	4MNMJAW: C?AFCPQ?LB CAFMMQF?TC B@CAPRML MTCPCAGMLQ ?@MSRA?JASJPRMPSQ	Y
9MSRE ' DPA?	4MNMJAW	4MNMJAW
9N?G	4MNMJAW	Y
9UCBCL	4MNMJAW@SRFCFC ?FC CMK C QP?CK CLRQ?@MSRBE QJ RMDG FFC ANK ANLRLRMDFF C QM?@SQRF?R?FC CSNMVDB RV@C?ODDCKB	9?K C?QDMP - P?BC Ž
: SR CW	4MNMJAW	4MNMJAW
; L@CB' P?@K @?RQ	4MNMJAW	: FFC SJRMLC'AFM@C QCK QML CLB MDRFK ?ODDCK CLRQ' ž f y ž f i' MD FFC ?ODDCK CLR ?FC ?BK G@R?CB TG ANK NSRCPQ

Exhibit 20: National Policies Regarding Use of Digital Devices in Mathematics Examinations

Reported by National Research Coordinators

2019

(Continued)

Country	National Policies Regarding Use of Digital Devices in Mathematics Examinations	
	Grade 4	Grade 8
;	3 MRCR?FOCF?TC QR?LB?FBQDMPA?JAS?PMPSCC ML QR?FC?JTCJ ?CCCCCK CLRQ?QU CJ?QIFC R?WC NDA?JAS?PMP?L FFC K ?HURBAMND QR?FOQ A?JAS?PMPQ?FC LMRNCFK QR?B ML - P?BC Ž K ?FECK ?RAQ ?CCCCCK CLRQ 3 MRCR?FOCF?TC QR?LB?FBQDMPA?JAS?PMPSCC ML QR?FC?JTCJ ANK NSR?POMP?@CFD?LB CNCA@MU FCF?CP? NFVZA?JMP? TGRS?J A?JAS?PMP?QEI, ?L ?NN ML ? R?@CR K ?W@C SCCB	3 MRCR?FOCF?TC QR?LB?FBQDMPA?JAS?PMPSCC ML QR?FC?JTCJ ?CCCCCK CLRQ?QU CJ?QIFC R?WC NDA?JAS?PMP?L FFC K ?HURBAMND QR?FOQ A?JAS?PMPQ?FC NCFK QR?B ML - P?BC # K ?FECK ?RAQ ?CCCCCK CLRQ 3 MRCR?FOCF?TC QR?LB?FBQDMPA?JAS?PMPSCC ML QR?FC?JTCJ ANK NSR?POMP?@CFD?LB CNCA@MU FCF?CP? NFVZA?JMP? TGRS?J A?JAS?PMP?QEI, ?L ?NN ML ? R?@CR K ?W@C SCCB
Benchmarking Participants		
5 LR?RBM) ?L?B?	4 MNIMAW' AANMB?E R?VFC +BSA?RML 7 S?JBM?LB' AANSLR?@GBV 5 DBAC - S@C DMP' AANK K MB?RMLQ 9NCAG?J6PMT@GBMLQ?LB +VCK N?RMLQ QRSBCLPQK ?WFCACFC ?AANK K MB?RMLQ@TMT@E RCAF L MVEVOMP?P?FEC?CA?J?C ?CCCCCK CLRQ	9?K C?QDMP - P?BC Ž
7 SC@CA) ?L?B?	4 MNIMAW	: FCF?FC LIVES@C@COMP NMA@QCF?FB@E FFC SCC MDRCAF L MVEW : FCEMTC LK CLRSEECQ?R?FC SCC MDCMK C RMMQ CSAF ?QCA@GL RBA A?JAS?PMPQ?LB QMBU?FC, @SR@QLMRK ?LB?R?VW: FCF?FC LM ES@C@C@COMP NMA@QCF?FB@E FFC SCC MDRCAF L MVE@QDMP CCANLB?PAK ?FECK ?RAQCV?K @?RMLQ
3 M@MU) @V/8SC@BL , CB	L ?AANMB?LAC U@F FFC @?Q@ NFM?PK MDNFK ?PMECLCP?JCBSA?RML, J): A?L ?LB CFMS.B @C U@C@JASCCB @?CCCCCK E FFC DMK ?RML MD SLGCFD?JCBSA?RML?J?ARMLQ U@F@F ?FC?JQVDMK CB @ FFC NFM@CC MD@RSBV@E K ?FECK ?RAQ	4 MNIMAW
- ?SR@LE, 9MSFE ' DPA?	9?K C?Q9MSFE ' DPA?	
< C@CFL) ?NC, 9MSFE ' DPA?	9?K C?Q9MSFE ' DPA?	
3 ?BR@, 9N?@	9?K C?Q9N?@	
' @S * F?@G; ' +	9?K C?Q; L@CB' P?@+K @?FOQ	
* S@?G; ' +	9?K C?Q; L@CB' P?@+K @?FOQ	