New York State Testing Program
Grade 6
Mathematics Test

Released Questions

2022

New York State administered the Mathematics Tests in May 2022 and is now making approximiately 75% of the questions from these tests available for review and use.

New York State Testing Program
Grades 3–8 Mathematics

Released Questions from 2022 Exams

Background

As in past years, SED is releasing large portions of the 2022 NYS Grades 3-8 English Language Arts and Mathematics test materials for review, discussion, and use.

For 2022, included in these released materials are at least 75 percent of the test questions that appeared on the 2022 tests (including all constructed-response questions) that counted toward students' scores. Additionally, SED is also providing a map that details what each released question measures and the correct response to each question. These released materials will help students, families, educators, and the public better understand the tests and the New York State Education Department's expectations for students.

Understanding Math Questions

Multiple-Choice Questions

Multiple-choice questions are designed to assess the New York State P-12 Learning Standards for Mathematics. Mathematics multiple-choice questions will be used mainly to assess standard algorithms and conceptual standards. Multiple-choice questions incorporate both the grade-level standards and the "Standards for Mathematical Practices." Many questions are framed within the context of real-world applications or require students to complete multiple steps. Likewise, many of these questions are linked to more than one standard, drawing on the simultaneous application of multiple skills and concepts.

Short-Response Questions

Short-response questions require students to complete tasks and show their work. Like multiple-choice questions, short-response questions will often require multiple steps, the application of multiple mathematics skills, and real-world applications. Many of the short-response questions will cover conceptual and application standards.

Extended-Response Questions

Extended-response questions ask students to show their work in completing two or more tasks or a more extensive problem. Extended-response questions allow students to show their understanding of mathematical procedures, conceptual understanding, and application. Extended-response questions may also assess student reasoning and the ability to critique the arguments of others. The scoring rubric for short and extended constructed-response questions can be found in the grade-level Educator Guides at http://www.nysed.gov/state-assessment/grades-3-8-ela-and-math-test-manuals.

New York State P-12 Learning Standards Alignment

The alignment(s) to the New York State P-12 Learning Standards for Mathematics is/are intended to identify the primary analytic skills necessary to successfully answer each question. However, some questions measure proficiencies described in multiple standards, including a balanced combination of procedure and conceptual understanding. For example, two-point and three-point constructed-response questions require students to show an understanding of mathematical procedures, concepts, and applications.

These Released Questions Do Not Comprise a "Mini Test"

To ensure it is possible to develop future tests, some content must remain secure. This document is *not* intended to be representative of the entire test, to show how operational tests look, or to provide information about how teachers should administer the test; rather, its purpose is to provide an overview of how the test reflects the demands of the New York State P-12 Learning Standards.

The released questions do not represent the full spectrum of the standards assessed on the State tests, nor do they represent the full spectrum of how the standards should be taught and assessed in the classroom. It should not be assumed that a particular standard will be measured by an identical question in future assessments.

Non: _____

Pwogram Egzamen Eta Nouyòk Egzamen Matematik Seyans 1

Ane **6**

26–28 Avril 2022

RELEASED QUESTIONS

Ane 6 Fèy Referans Matematik

KONVÈSYON

1 pous = 2,54 santimèt

1 mèt = 39,37 pous

1 mil = 5.280 pye

1 mil = 1.760 yad

1 mil = 1,609 kilomèt

1 kilomèt = 0,62 mil

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1 ka = 2 pent

1 galon = 4 ka

1 galon = 3,785 lit

1 lit = 0,264 galon

1 lit = 1.000 santimèt kib

FÒMIL

Triyang	$A = \frac{1}{2}bh$
Prism Rektangilè Dwa	$V = Bh$ oswa $V = lwh$

Seyans 1

KONSÈY POU PRAN EGZAMEN AN

Men kèk sijesyon pou ede ou bay pi bon rannman:

- Li chak kesyon avèk atansyon epi reflechi sou chak repons anvan ou fè chwa ou.

- Yo ba w enstriman matematik (yon règ, ak yon rapòtè) epi yon gen fèy referans ladan pou sèvi pandan egzamen an. Se ou ki pou konnen kilè pou sèvi ak chak grenn enstriman ak fèy referans la tou. Ou dwe sèvi ak enstriman matematik yo avèk fèy referans la tou nenpòt ki lè w panse l ap ede w reponn yon kesyon.

1 Ki valè pou m ki fè inegalite a vrè?

$$3m - 4 < 11$$

A   4

B   5

C   6

D   7

2 Yon kiltivatè mete nich myèl ki gen myèl nan yo nan jaden fwi li an pou polinize plant yo. Tablo ki anba la a montre rapò kantite nich myèl ak kantite akr nan jaden fwi a.

NICH MYÈL PA AKR

Kantite Nich Myèl	3	9	12	18
Kantite Akr	8	24	32	?

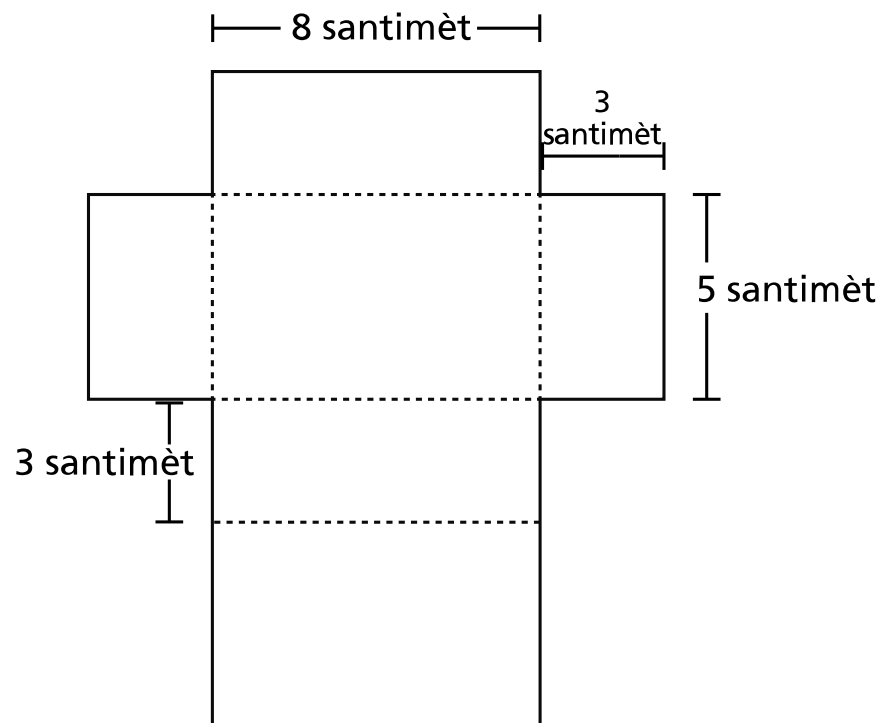Si myèl yo polinize plant yo a yon to konstan, konbyen akr ki pral polinize pa myèl yo ki nan 18 nich myèl yo?

A   38

B   40

C   44

D   48

KONTINYE

3 Nou montre filè yon pris rektangilè anba la a.

Konbyen santimèt kare sipèfisi pris rektangilè a ye?

A   60

B   79

C   158

D   360

4 Jake pran leson gita ki koute $120,00$ pa mwa. Ki ekwasyon ou ka itilize pou detèmine kantite total dola, d, Jake peye pou leson pou nenpòt kantite mwa, m?

A $d = 120 \times m$

B $m = 120 \times d$

C $d = 120 + m$

D $m = 120 + d$

5 Claire gen 6 gwo anvlòp ak 11 ti anvlòp. Kisa rapò gwo anvlòp ak kantite total anvlòp yo ye?

A   5 : 11
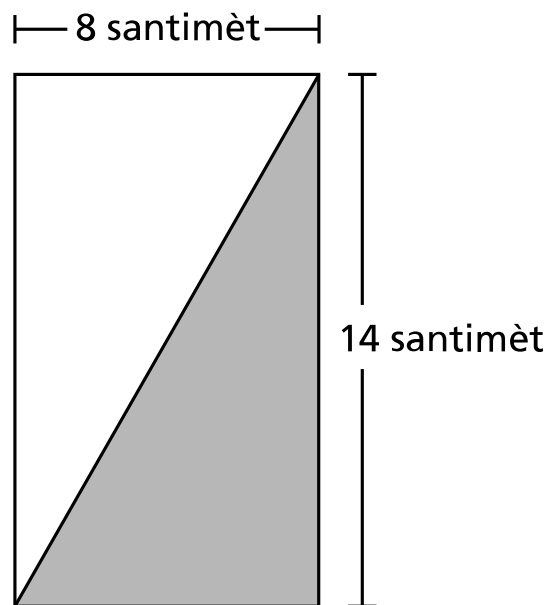
B   6 : 11

C   6 : 17

D   11 : 17

KONTINYE

11 Ki valè ekspresyon ki pi ba a lè $x = 7$?

$3x^2 - 2x + 3$

A 31

B 50

C 136

D 164

12 Pi ba a se yon rektang ki gen yon pati ki kolore an gri.

$\longmapsto$ 8 santimèt $\longmapsto$

14 santimèt

Konbyen santimèt kare sifas pati ki kolore an gri nan rektang la ye?

A 28

B 44

C 56

D 112

15 Yon gwoup 10 elèv ki fè pati yon Klèb Lasyans ale nan yon joune. Kantite sa a reprezante 20% kantite total elèv ki nan Klèb Lasyans lan. Konbyen elèv ki gen nan Klèb Lasyans lan ototal?

    A   20

    B   30

    C   50

    D   80

16 Ki valè x ki fè ekwasyon an vrè?

$$4x - 8 = 4$$

    A   1

    B   3

    C   4

    D   9

17 Anplwaye nan yon konpayi konstriksyon ap bati yon kloti ozalantou perimèt yon sit travay. Perimèt sit travay la se $\frac{1}{4}$ mil. Pri kloti a se $\$20,00$ pa yad. Ki pri total kloti y ap bezwen pou perimèt sit travay la?
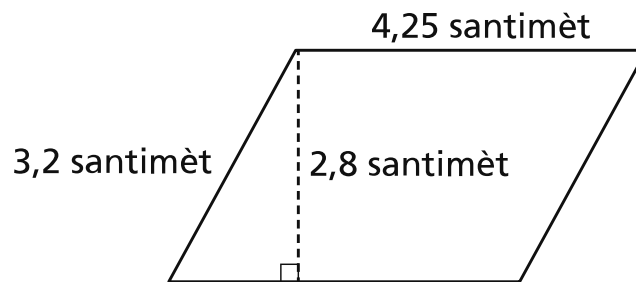
    A $\$5.000,00$

    B $\$8.800,00$

    C $\$17.600,00$

    D $\$26.400,00$

KONTINYE

22 Ralph gen $\frac{3}{4}$ galon penti. Li vle konsève tout penti a egalego nan 5 veso. Konbyen galon

penti Ralph pral konsève nan chak veso?

A $\quad \frac{3}{20}$

B $\quad \frac{8}{5}$

C $\quad \frac{15}{4}$

D $\quad \frac{17}{4}$

23 Piba a se yon paralelogram.

4,25 santimèt

3,2 santimèt   2,8 santimèt

Konbyen santimèt kare sifas paralelogram nan ye?

A $\quad$ 8,96

B $\quad$ 10,25

C $\quad$ 11,9

D $\quad$ 13,6

KONTINYE

26 Pi ba a se yon dwat nimerik ak pwen Q, R, S, ak T.

$$\overset{\begin{array}{ccccc} Q & R & S & T \end{array}}{\underset{\begin{array}{ccccccc} -3 & -2 & -1 & 0 & 1 & 2 & 3 \end{array}}{\longleftrightarrow}}$$
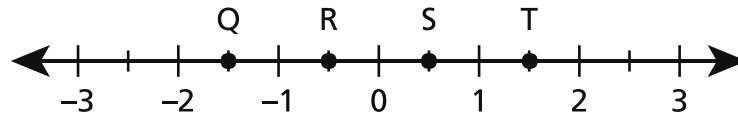
Ki pwen ki reprezante $-\dfrac{1}{2}$?

A   pwen Q

B   pwen R

C   pwen S

D   pwen T

27 Madmwazèl Wilson ap achte pake kreyon. Chak pake kreyon koute $11,52 epi li gen 96 kreyon. Konbyen pri inite pou yon kreyon?

A $0,12

B $0,96

C $1,20

D $1,92

28 Twa somè yon rektang chita nan $(2, 4)$, $(-2, -5)$, ak $(-2, 4)$ sou yon kowòdone plan. Kisa ki kowòdone yo pou katriyèm somè rektang la?

A $(2, 5)$

B $(2, -5)$

C $(5, 2)$

D $(-5, -2)$

KONTINYE

Ane 6
2022
Egzamen Matematik
Seyans 1
26–28 Avril 2022

Grade 6
2022
Mathematics Test
Session 1
April 26–28, 2022

Non: _____

Pwogram Egzamen Eta Nouyòk Egzamen Matematik Seyans 2

Ane **6**

26–28 Avril 2022

RELEASED QUESTIONS

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KONVÈSYON

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FÒMIL

Triyang	$A = \frac{1}{2}bh$
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KONSÈY POU PRAN EGZAMEN AN

Men kèk sijesyon pou ede ou bay pi bon rannman:

- Li chak kesyon avèk atansyon epi reflechi sou chak repons anvan ou fè chwa ou oswa ekri repons ou.

- Yo ba w enstriman matematik (yon règ, yon rapòtè ak yon kalkilatris) epi yon gen fèy referans ladan pou sèvi pandan egzamen an. Se ou ki pou konnen kilè pou sèvi ak chak grenn enstriman ak fèy referans la tou. Ou dwe sèvi ak enstriman matematik yo avèk fèy referans la tou nenpòt ki lè w panse l ap ede w reponn yon kesyon.

- Pa bliye montre kijan w fè jwenn repons lan lè yo mande ou sa.

32 Gen mozayik wouj ak mozayik ble nan yon bwat. Rapò mozayik wouj ak mozayik ble a se 3 : 5. Gen 12 mozayik ble an plis pase mozayik wouj nan bwat la. Konbyen mozayik wouj ki gen nan bwat la?

  A 18

  B 20

  C 30

  D 48

33 Konbyen pous kare sipèfisi pris rektangilè ki fòme lè ou plwaye filè ki anba a ye?
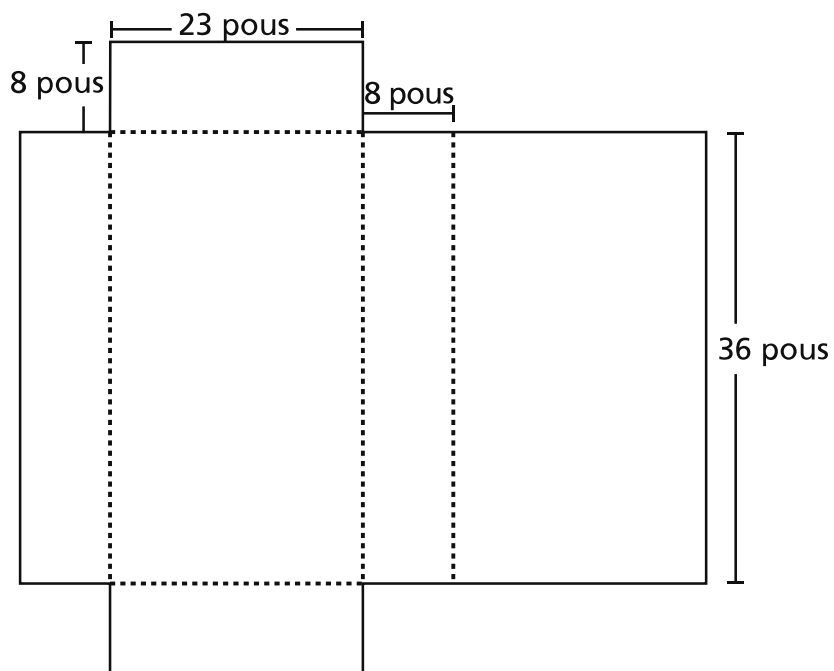
  A 1.300

  B 2.232

  C 2.416

  D 2.600

34 Jasmine ale nan makèt pou achte fwi pou fè yon salad fwi. Lis ki anba la a montre kantite ak pri chak kalite fwi li achte.

- 3 liv pòm pou $4,05
- 2 liv rezen pou $4,80
- 5 liv zoranj pou $7,50
- 3 liv pèch pou $4,65

Ki kalite fwi ki koute $1,55 pa liv?

A   pòm
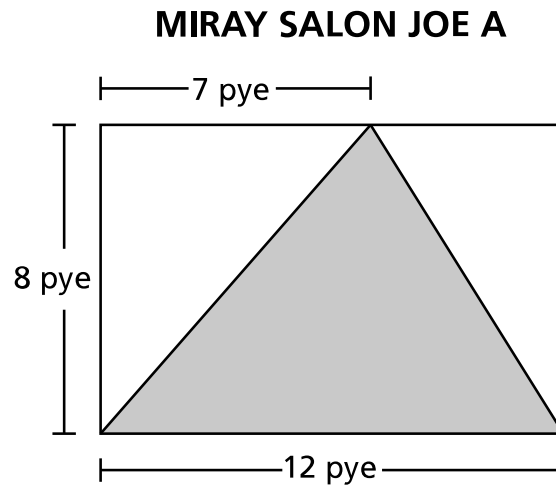
B   rezen

C   zoranj

D   pèch

35 Tanperati deyò nan yon vil se -20 degre Farennay. Ki chanjman nan tanperati, an degre Farennay, ki t ap fè tanperati deyò a vin 0 degre Farennay?

A -21

B -20

C 0

D 20

36 Sa a se yon dyagram ak yon miray salon Joe ak yon desen jeyometrik. Joe te pentire triyang ki kolore an gri a sou miray salon an.

MIRAY SALON JOE A

Konbyen pye kare sifas triyang la ki kolore an gri Joe te pentire a ye?

A   20

B   28

C   48

D   96

37 Te gen yon total 640 elèv nan yon lekòl vandredi. Chak elèv te swa mache oswa pran yon bis pou ale nan lekòl la. Si 45% nan kantite elèv total la te mache al lekòl vandredi, konbyen nan elèv yo ki te pran yon bis pou ale lekòl?

A   288

B   352

C   585

D   595

KONTINYE

38 Josh gen c pyès monnen. Nick gen 4 mwens pase 3 fwa kantite pyès monnen Josh genyen. Ki ekspresyon ou ka itilize pou montre konbyen pyès monnen Nick genyen?

A $3c - 4$

B $3 - 4c$

C $4c - 3$

D $4 - 3c$

39 De elèv, Elèv A ak Elèv B, deklare yo konnen bon reprezantasyon ekspresyon $\dfrac{9}{y}(3t)$.

- Elèv A reprezante ekspresyon an kòm pwodwi 9 ak y fwa pwodwi 3 ak t.

- Elèv B reprezante ekspresyon an kòm kosyan 9 ak y fwa sòm 3 ak t.

Reklamasyon toude elèv yo pa kòrèk. Kisa ki fè chak reprezantasyon pa kòrèk?

Eksplike repons ou an.

_____

_____

_____

40 Yon antrenè kous kreye kou obstak pou ekip li a. Antrenè a trase pozisyon twa obstak sou kowòdone plan ki anba la a.
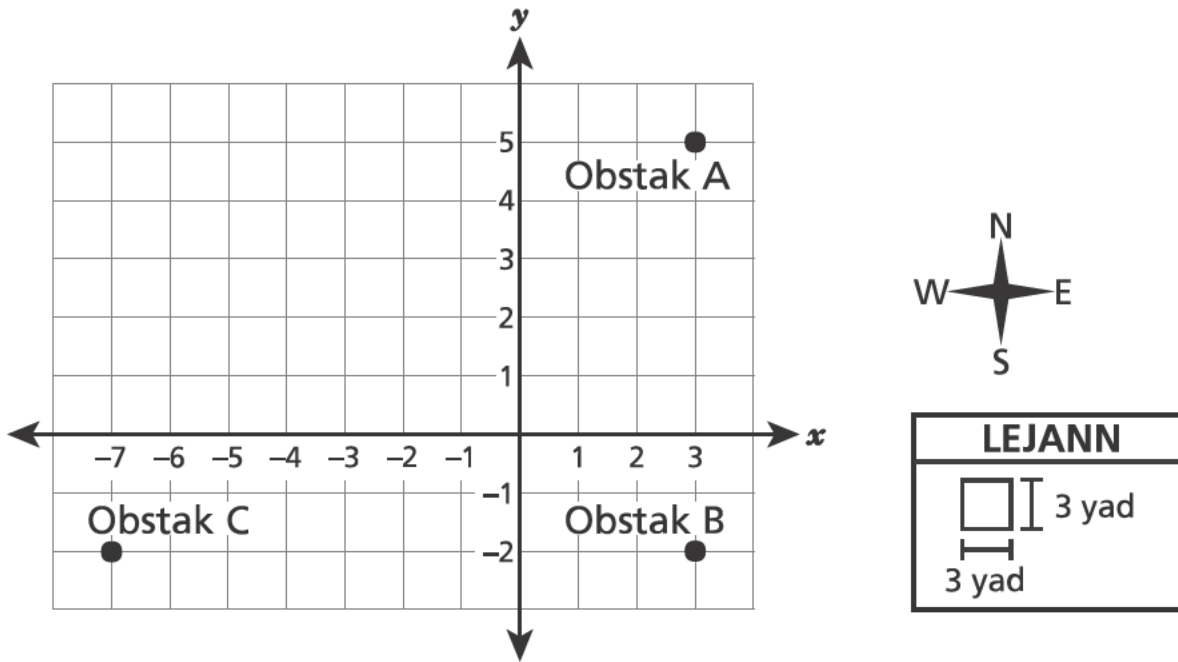
Chak inite sou kowòdone plan an reprezante 3 yad. Yon elèv kòmanse sou Obstak A, apresa li kouri nan direksyon sid pou ale sou Obstak B, epi apresa li kouri nan direksyon lwès pou ale sou Obstak C. Konbyen yad distans total elèv la te kouri pou soti sou Obstak A pou rive sou Obstak C?

Montre kijan ou fè pou jwenn repons lan.

Repons _____ yad

41 Yon pwopriyetè restoran kòmande nouvo asyèt ak kiyè selon enfòmasyon yo ki anba la a.

- yo vann asyèt yo nan pake 9

- yo vann kiyè yo nan pake 12

Pwopriyetè restoran an kòmande menm kantite asyèt ak kiyè. Ki **pi piti** kantite pake asyèt ak pake kiyè li dwe kòmande pou kantite asyèt ak kiyè yo egal?

Montre kijan ou fè pou jwenn repons lan.

Repons _____ pake asyèt

_____ pake kiyè

KONTINYE

42 Dimansyon yon bwat sereyal se 12 pous, $7\frac{3}{4}$ pous, ak 2 pous. Dimansyon yon bwat patisri se $3\frac{2}{3}$ pous, $3\frac{1}{2}$ pous, ak $2\frac{1}{3}$ pous. Kisa ki diferans, an volim, an pous kib ant de bwat yo?

Montre kijan ou fè pou jwenn repons lan.

Repons _____ pous kib

KONTINYE

43 De elèv evalye ekspresyon $17(4 + 15)$.

- Pou evalye ekspresyon an, elèv A ajoute pwodwi 17 ak 4 avèk pwodwi 17 ak 15.

- Pou evalye ekspresyon an, elèv B detèmine pwodwi 17 ak 19.

Èske evalyasyon chak elèv yo kòrèk oswa yo pa kòrèk?

Eksplike repons ou an.

_____

_____

_____

44 Ryan livre flè bay de kliyan. Li kondwi pandan 12 minit a yon vitès mwayèn 40 mil pa èdtan pou rive kote premye kliyan li an. Apresa li kondwi pandan 15 minit a yon vitès mwayèn 50 mil pa èdtan pou rive kote dezyèm kliyan li an. Pandan 27 minit l ap kondui an, konbyen mil Ryan te kondwi ototal?

Montre kijan ou fè pou jwenn repons lan.

Repons _____ mil

45 Johnny gen 21 lane. Laj li se 3 fwa laj Becky. Ekri epi rezoud yon ekwasyon pou detèmine laj Becky, *a*.

Montre kijan ou fè pou jwenn repons lan.

Repons   *a* = _____

46 Yon magazen ki vann founiti biwo vann bwat kreyon. Chak bwat gen 160 kreyon. Ekri yon ekwasyon ki reprezante kantite total kreyon, y, ki nan x bwat.

Ekwasyon _____

Si $x = 12$ pou yon jou lavant, sèvi ak ekwasyon ou a pou jwenn kantite total kreyon magazen founiti an vann.

Montre kijan ou fè pou jwenn repons lan.

Repons _____ kreyon

Ane 6

2022
Egzamen Matematik
Seyans 2
26–28 Avril 2022

Grade 6

2022
Mathematics Test
Session 2
April 26–28, 2022

Question	Type	Key	Points	Standard	Cluster
Session 1					
1	Multiple Choice	A	1	CCSS.Math.Content.6.EE.B.5	Expressions and Equations
2	Multiple Choice	D	1	CCSS.Math.Content.6.RP.A.3a	Ratios and Proportional Relationships
3	Multiple Choice	C	1	CCSS.Math.Content.6.G.A.4	Geometry
4	Multiple Choice	A	1	CCSS.Math.Content.6.EE.C.9	Expressions and Equations
5	Multiple Choice	C	1	CCSS.Math.Content.6.RP.A.1	Ratios and Proportional Relationships
11	Multiple Choice	C	1	CCSS.Math.Content.6.EE.A.2c	Expressions and Equations
12	Multiple Choice	C	1	CCSS.Math.Content.6.G.A.1	Geometry
15	Multiple Choice	C	1	CCSS.Math.Content.6.RP.A.3c	Ratios and Proportional Relationships
16	Multiple Choice	B	1	CCSS.Math.Content.6.EE.B.5	Expressions and Equations
17	Multiple Choice	B	1	CCSS.Math.Content.6.RP.A.3d	Ratios and Proportional Relationships
22	Multiple Choice	A	1	CCSS.Math.Content.6.NS.A.1	The Number System
23	Multiple Choice	C	1	CCSS.Math.Content.6.G.A.1	Geometry
26	Multiple Choice	B	1	CCSS.Math.Content.6.NS.C.6c	The Number System
27	Multiple Choice	A	1	CCSS.Math.Content.6.RP.A.2	Ratios and Proportional Relationships
28	Multiple Choice	B	1	CCSS.Math.Content.6.G.A.3	Geometry
Session 2					
32	Multiple Choice	A	1	CCSS.Math.Content.6.RP.A.3a	Ratios and Proportional Relationships
33	Multiple Choice	D	1	CCSS.Math.Content.6.G.A.4	Geometry
34	Multiple Choice	D	1	CCSS.Math.Content.6.RP.A.2	Ratios and Proportional Relationships
35	Multiple Choice	D	1	CCSS.Math.Content.6.NS.C.5	The Number System
36	Multiple Choice	C	1	CCSS.Math.Content.6.G.A.1	Geometry
37	Multiple Choice	B	1	CCSS.Math.Content.6.RP.A.3c	Ratios and Proportional Relationships
38	Multiple Choice	A	1	CCSS.Math.Content.6.EE.B.6	Expressions and Equations
39	Constructed Response		2	CCSS.Math.Content.6.EE.A.2a	Expressions and Equations
40	Constructed Response		2	CCSS.Math.Content.6.NS.C.8	The Number System
41	Constructed Response		2	CCSS.Math.Content.6.NS.B.4	The Number System
42	Constructed Response		2	CCSS.Math.Content.6.G.A.2	Geometry
43	Constructed Response		2	CCSS.Math.Content.6.EE.A.3	Expressions and Equations
44	Constructed Response		2	CCSS.Math.Content.6.RP.A.3b	Ratios and Proportional Relationships
45	Constructed Response		2	CCSS.Math.Content.6.EE.B.7	Expressions and Equations
46	Constructed Response		3	CCSS.Math.Content.6.EE.C.9	Expressions and Equations

*This item map is intended to identify the primary analytic skills necessary to successfully answer each question. However, some questions measure proficiencies described in multiple standards, including a balanced combination of procedural and conceptual understanding.