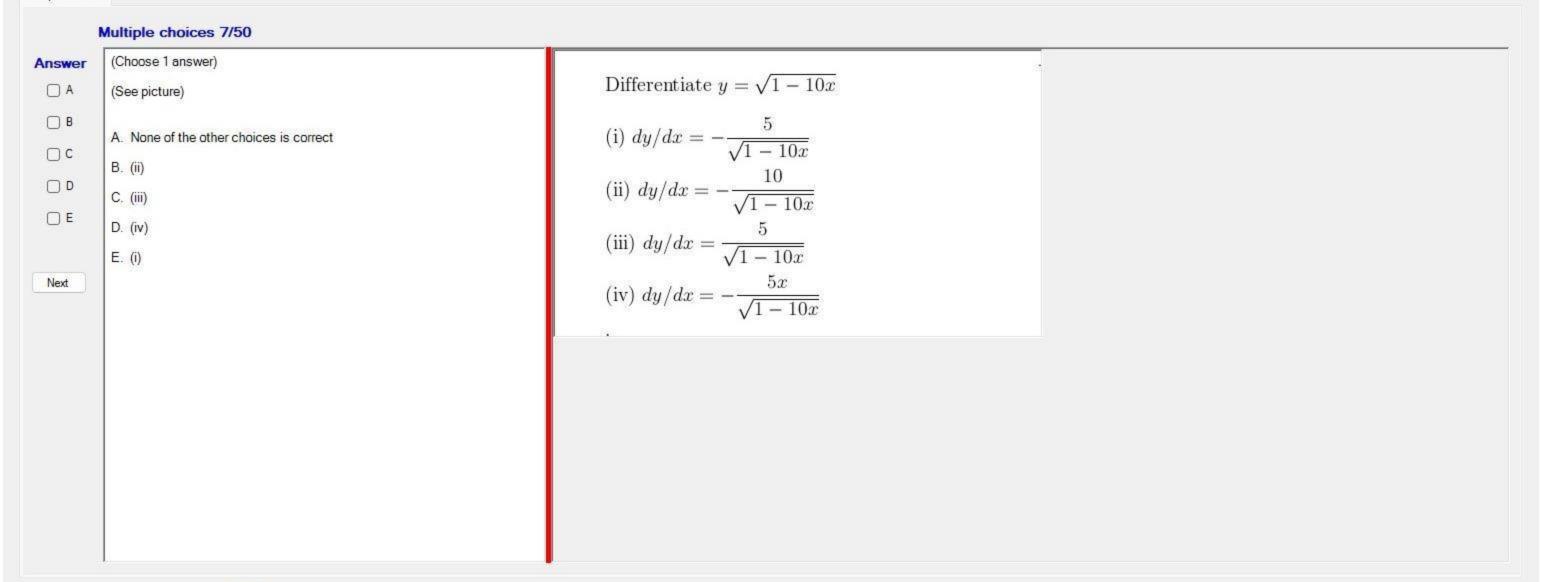


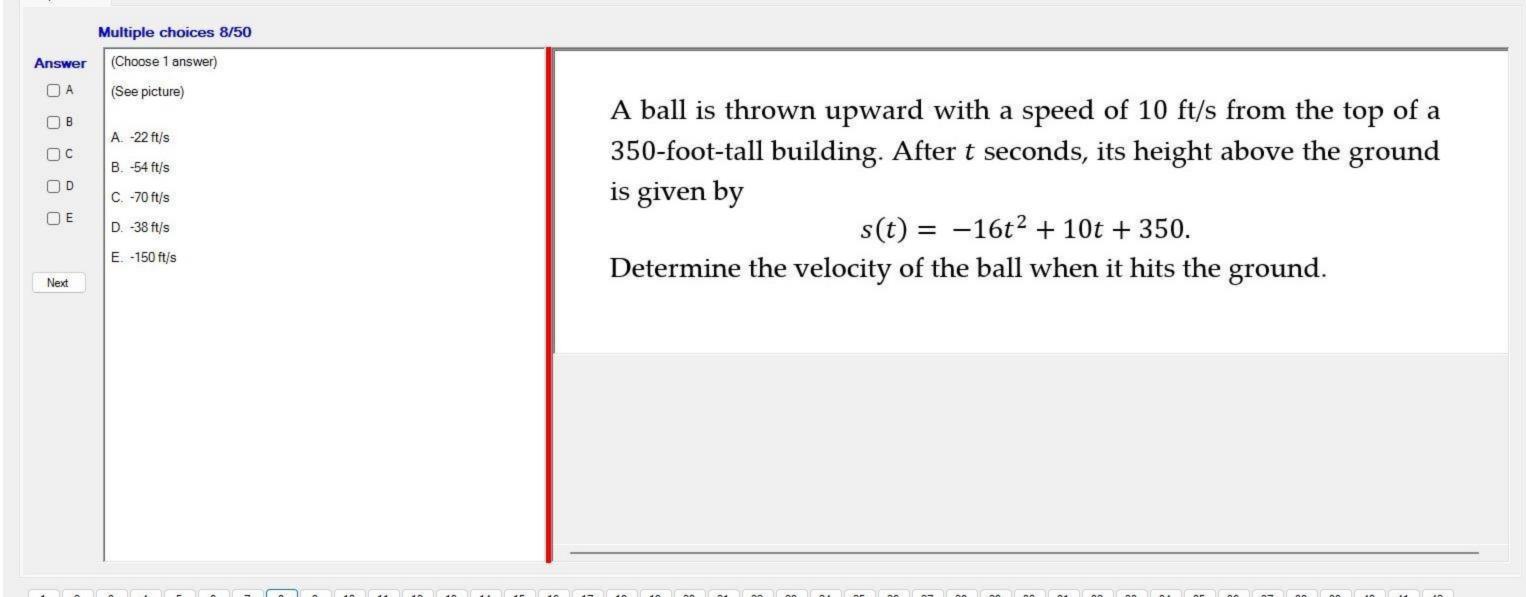
I want to finish the exam.



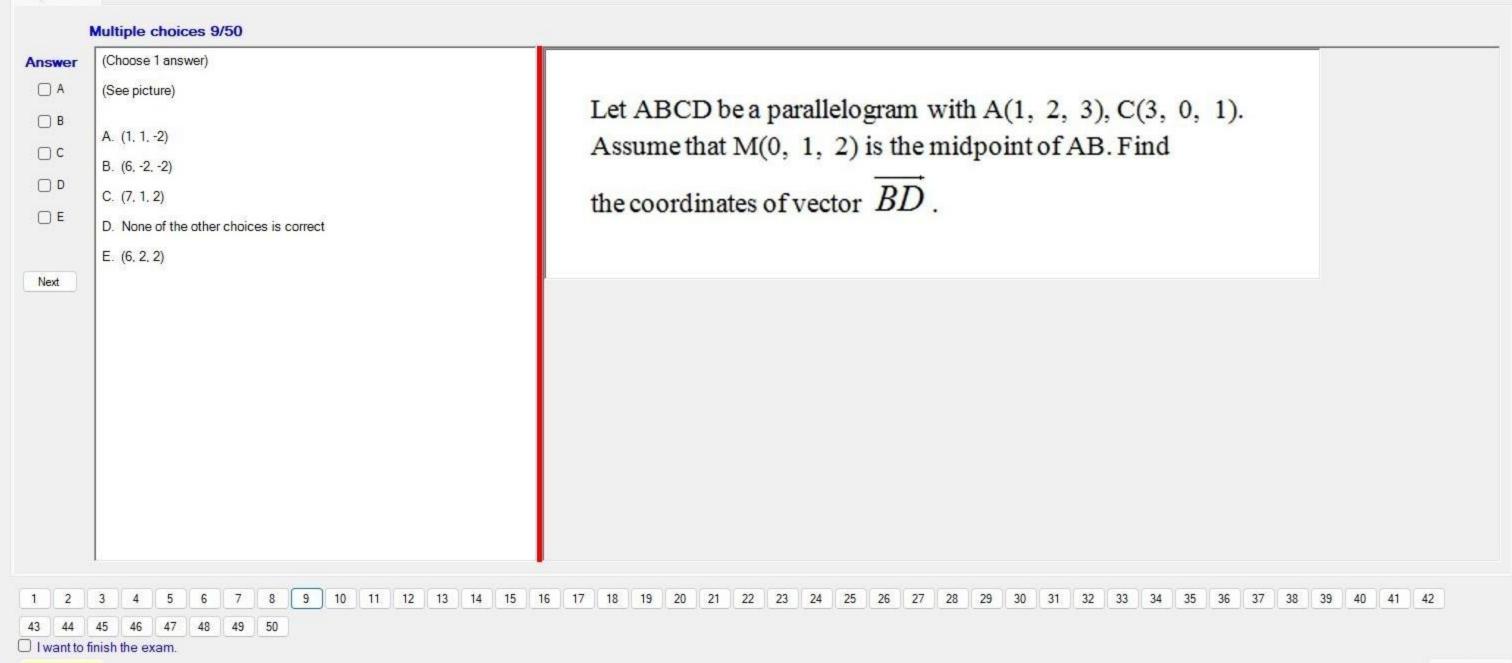
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42

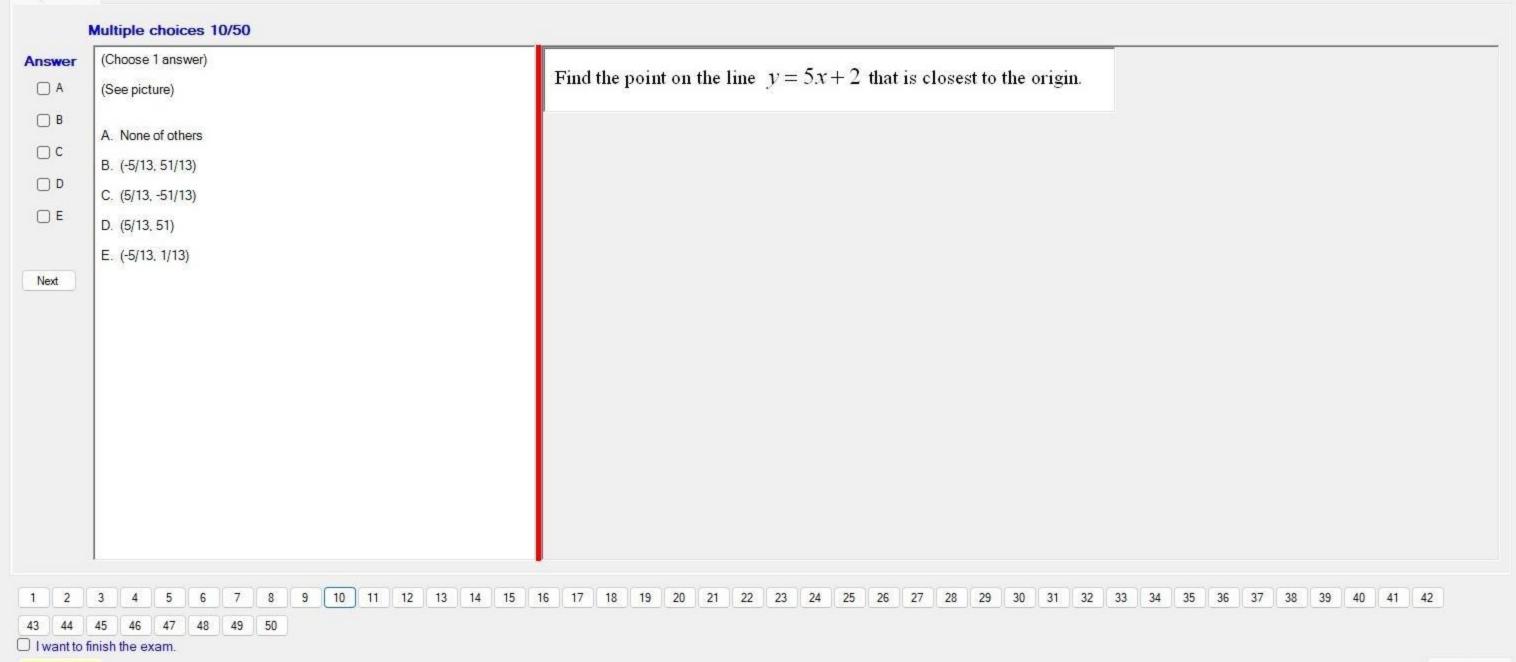
43 44 45 46 47 Usant to finish the exam.

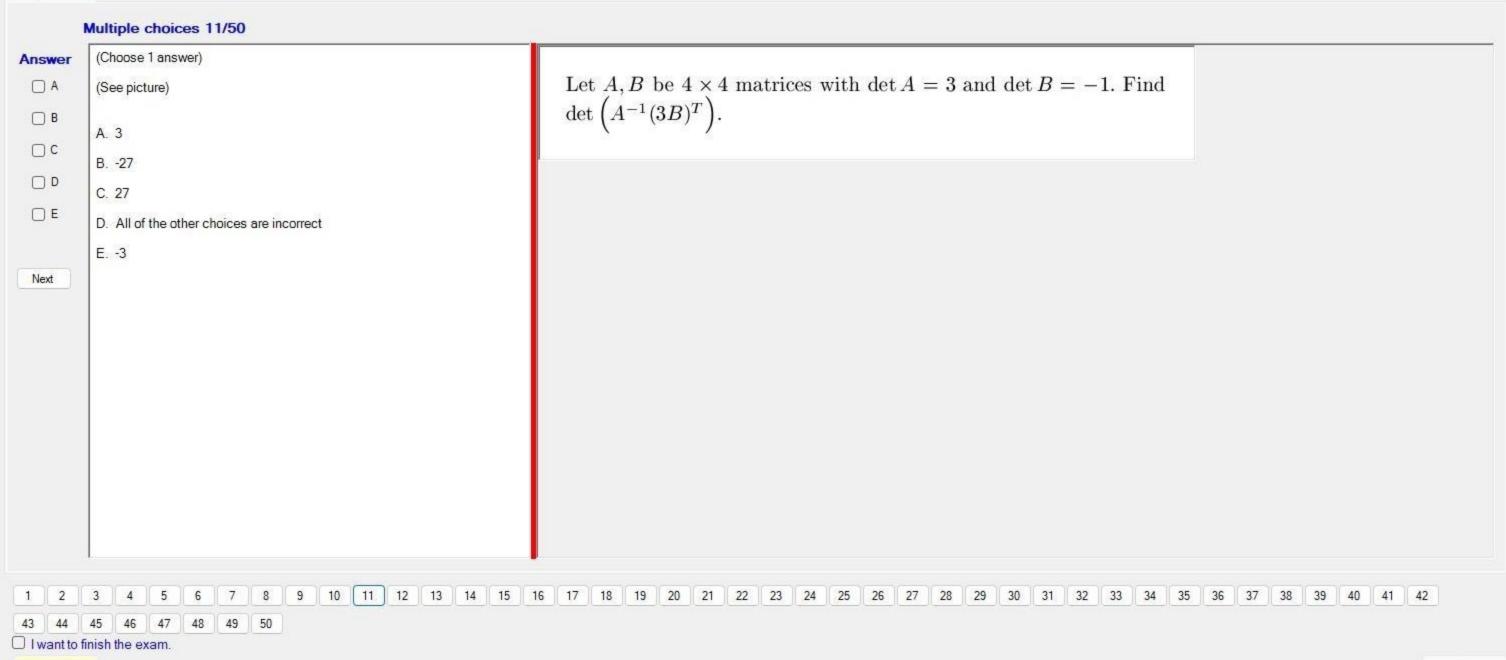
48 49 50

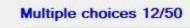


49 50









Answer

(Choose 1 answer)

□ A

□ B

□ C

□ D

□ E

Next

(See picture)

A. -1

B. None of the other choices is correct

C. 4

E. -4

Let A be the matrix that satisfies:

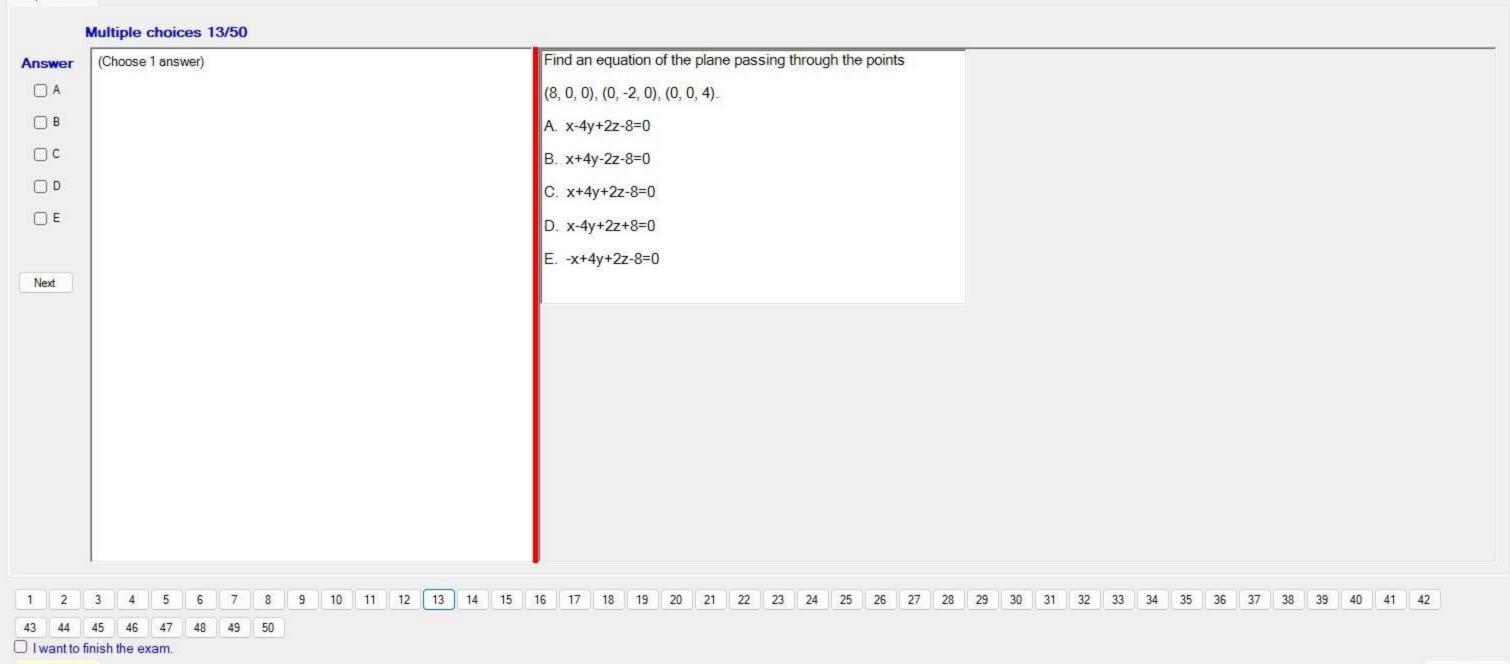
$$A^{T} - \begin{bmatrix} 0 & -11 & 7 \\ -1 & -7 & 18 \\ 1 & -6 & 13 \end{bmatrix} = \begin{bmatrix} 2 & 3 & -1 \\ 1 & 1 & -2 \\ -1 & 2 & 1 \end{bmatrix}$$

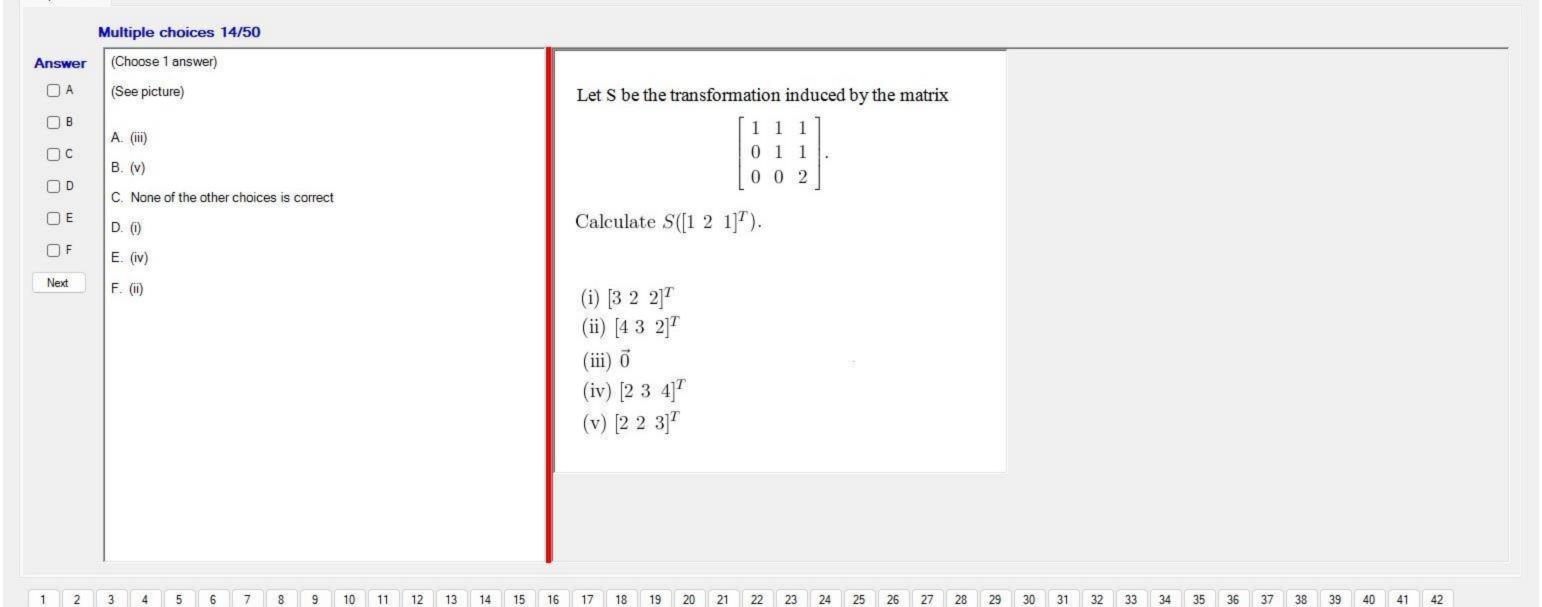
Find the (2,3)-entry of A.

9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42

47 48 49 50

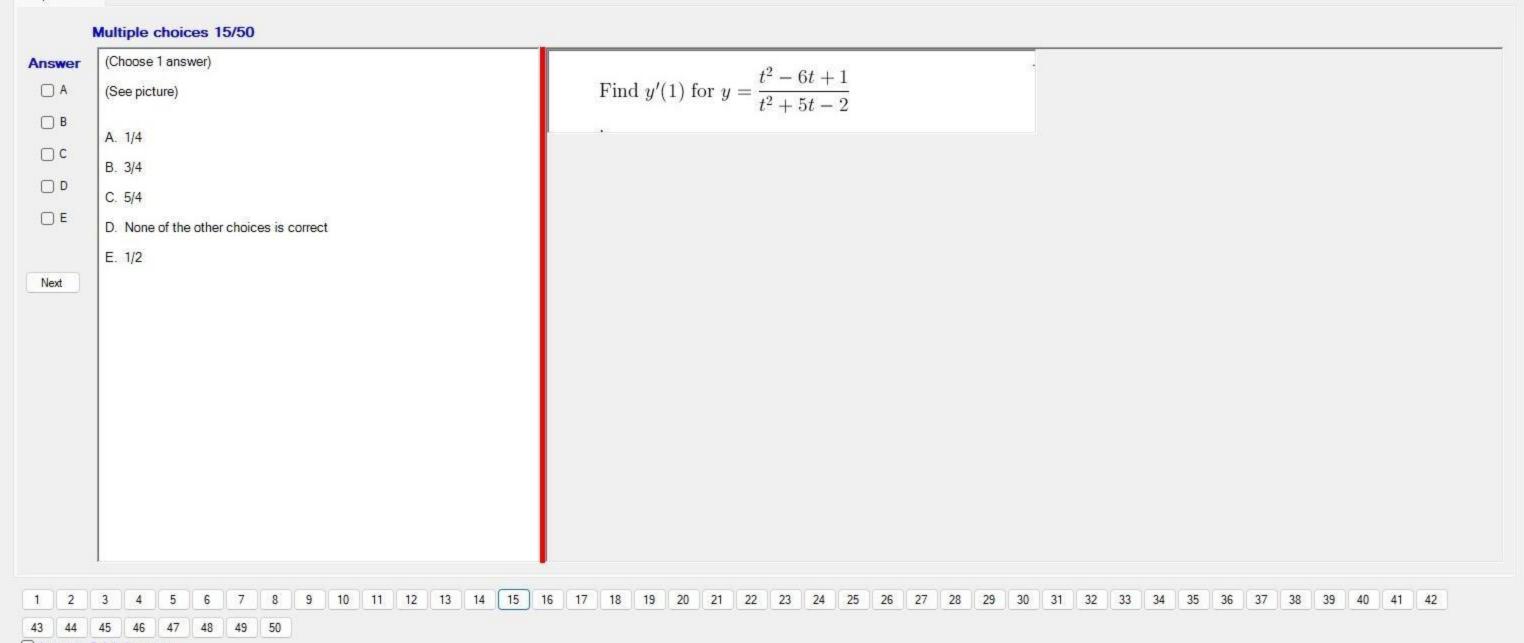
I want to finish the exam.

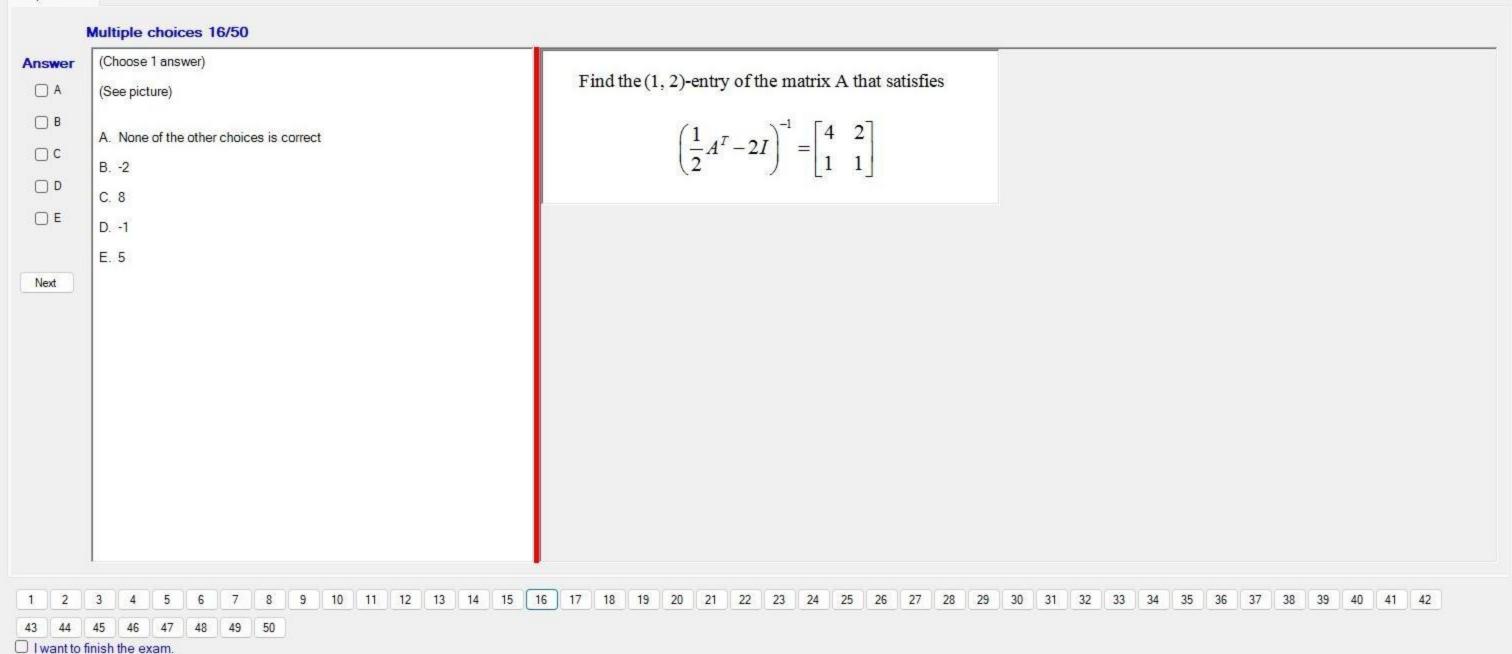


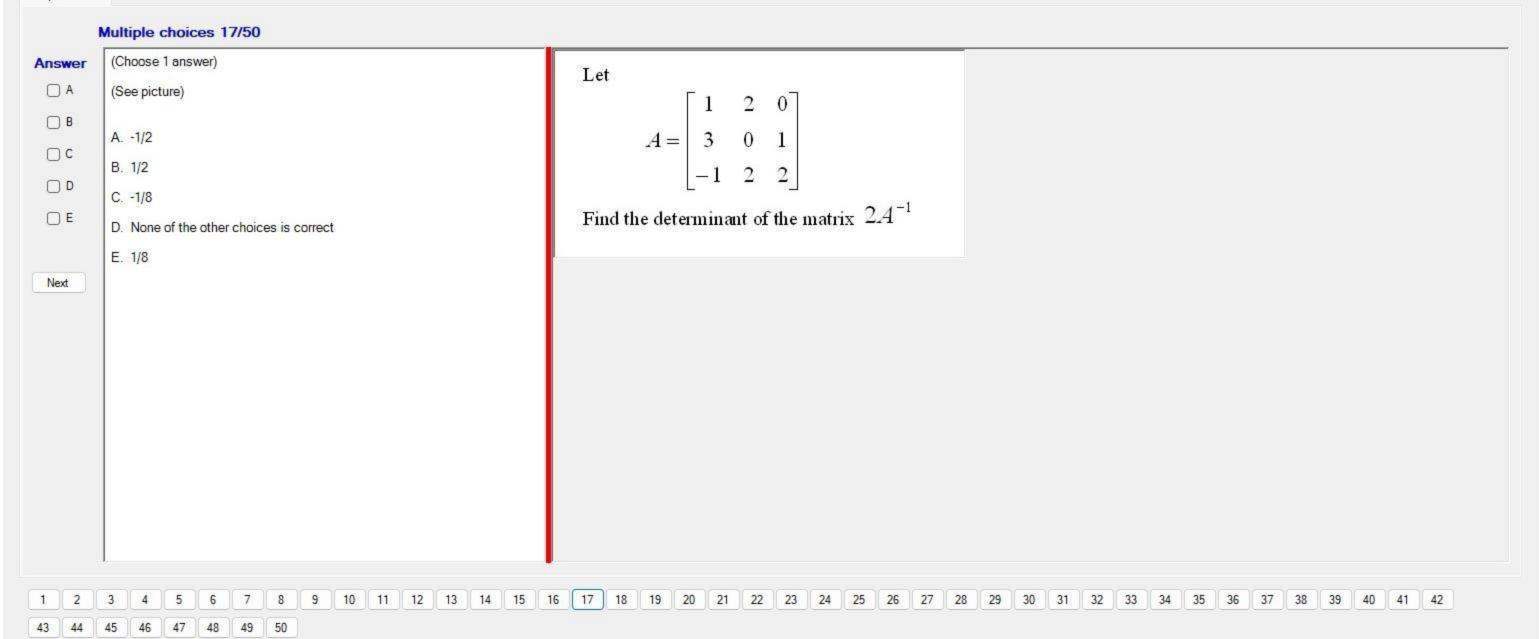


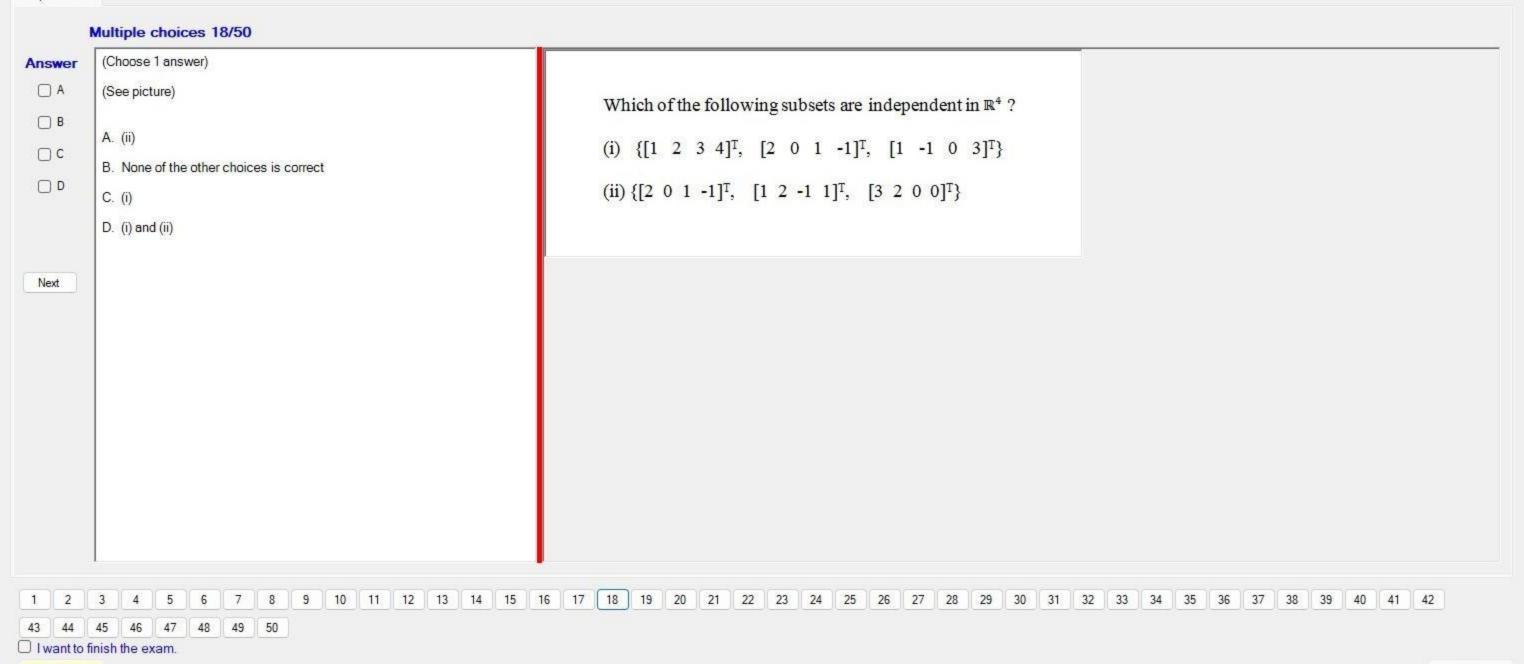
43 44 45 46 47 48 49 50

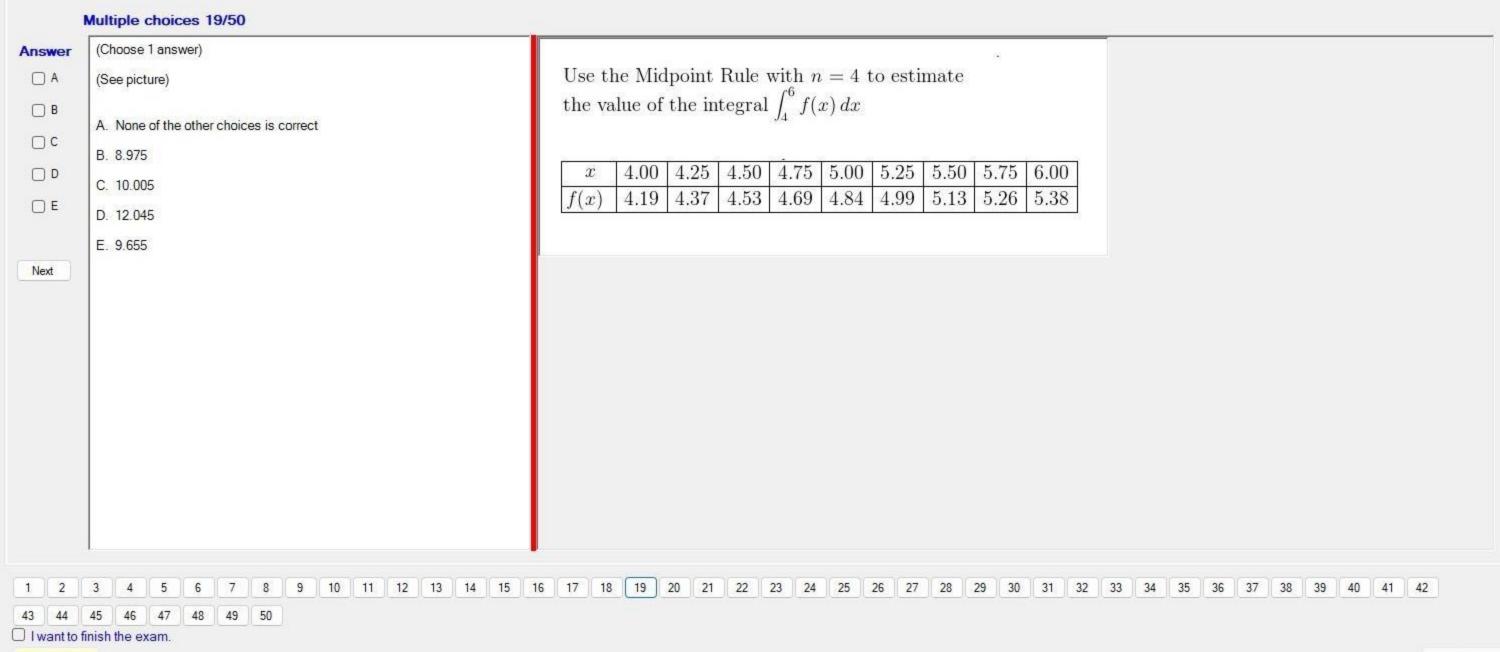
I want to finish the exam.

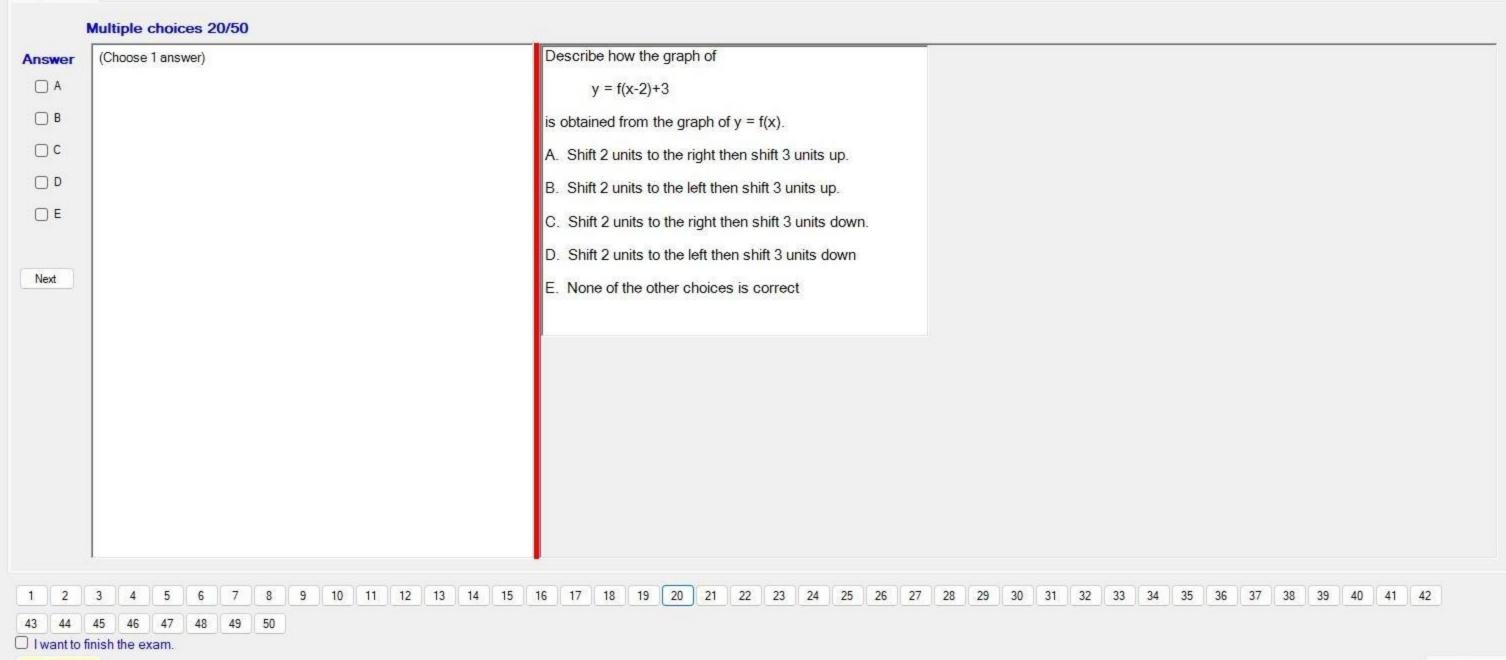


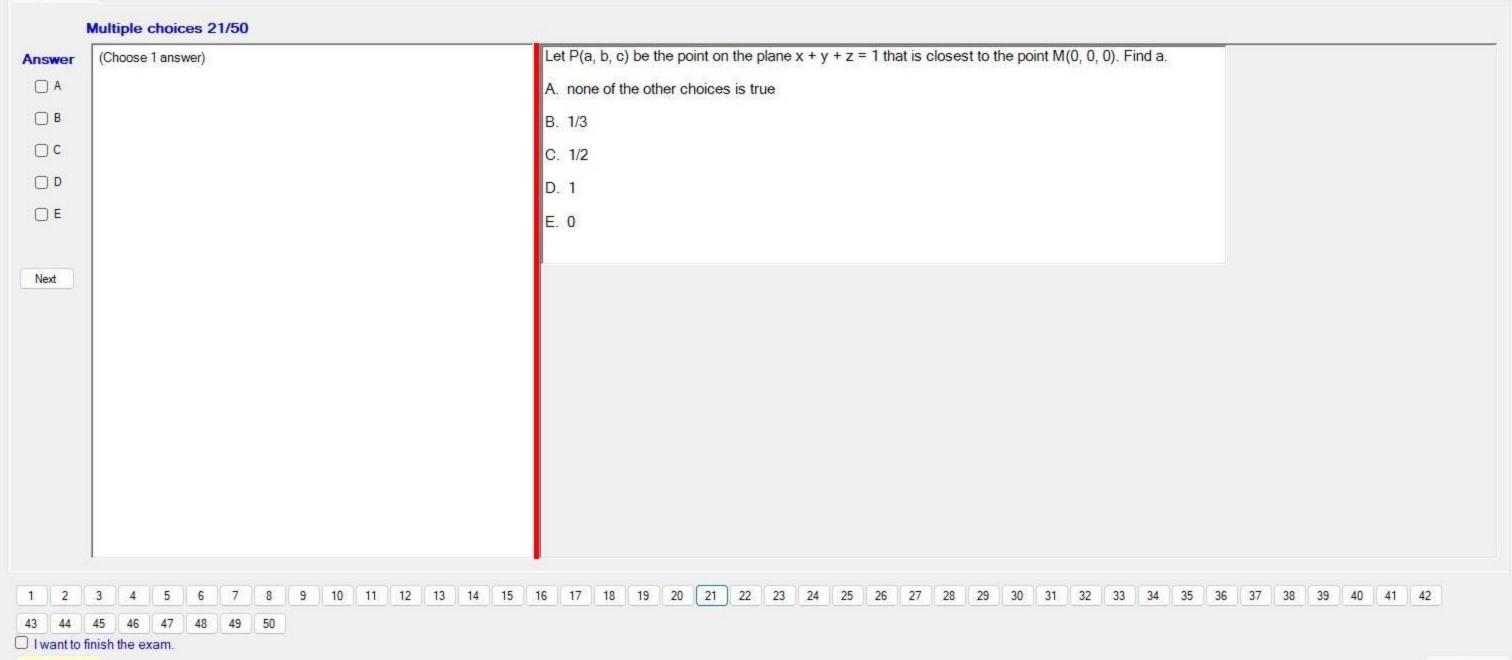


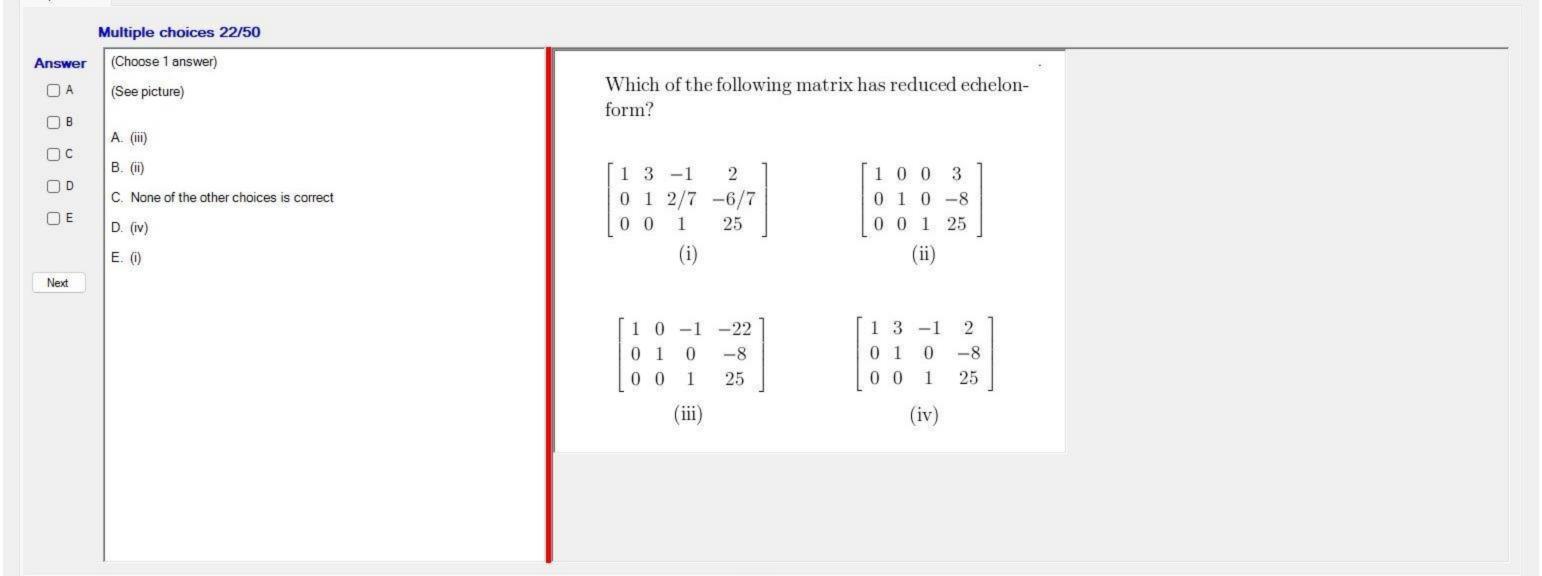








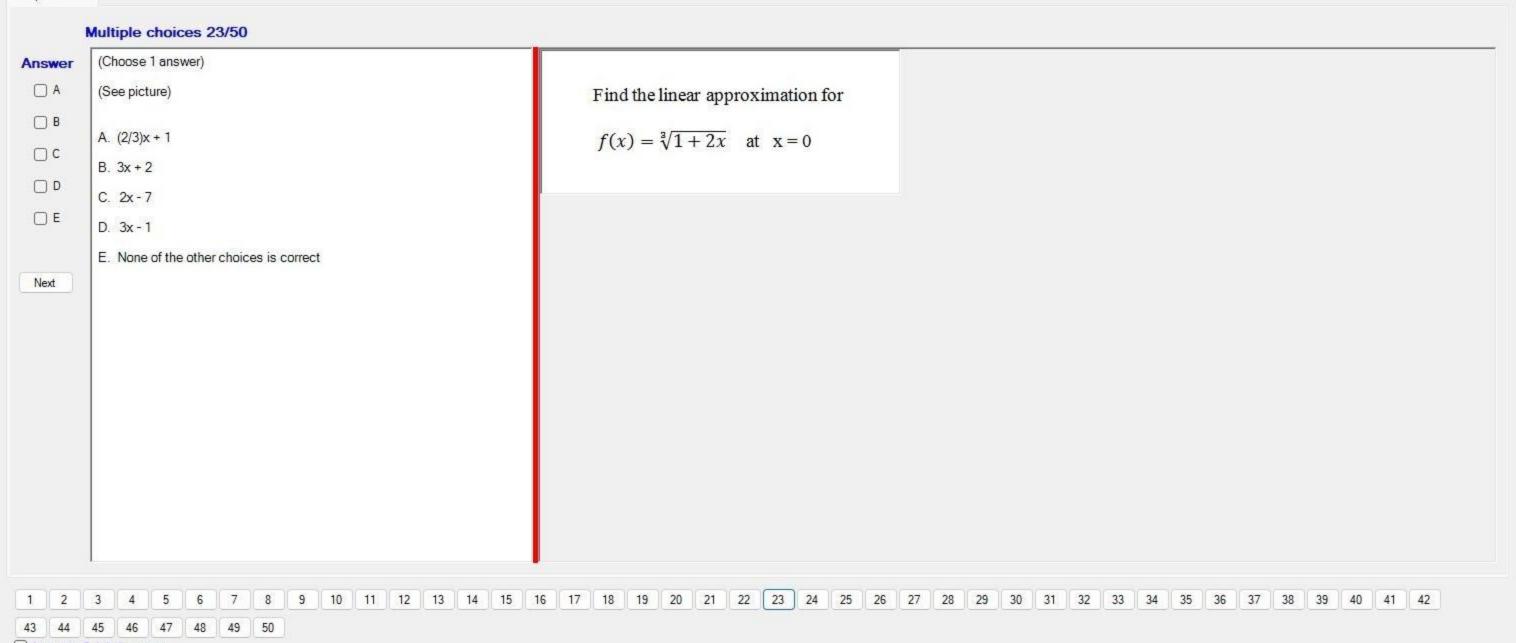


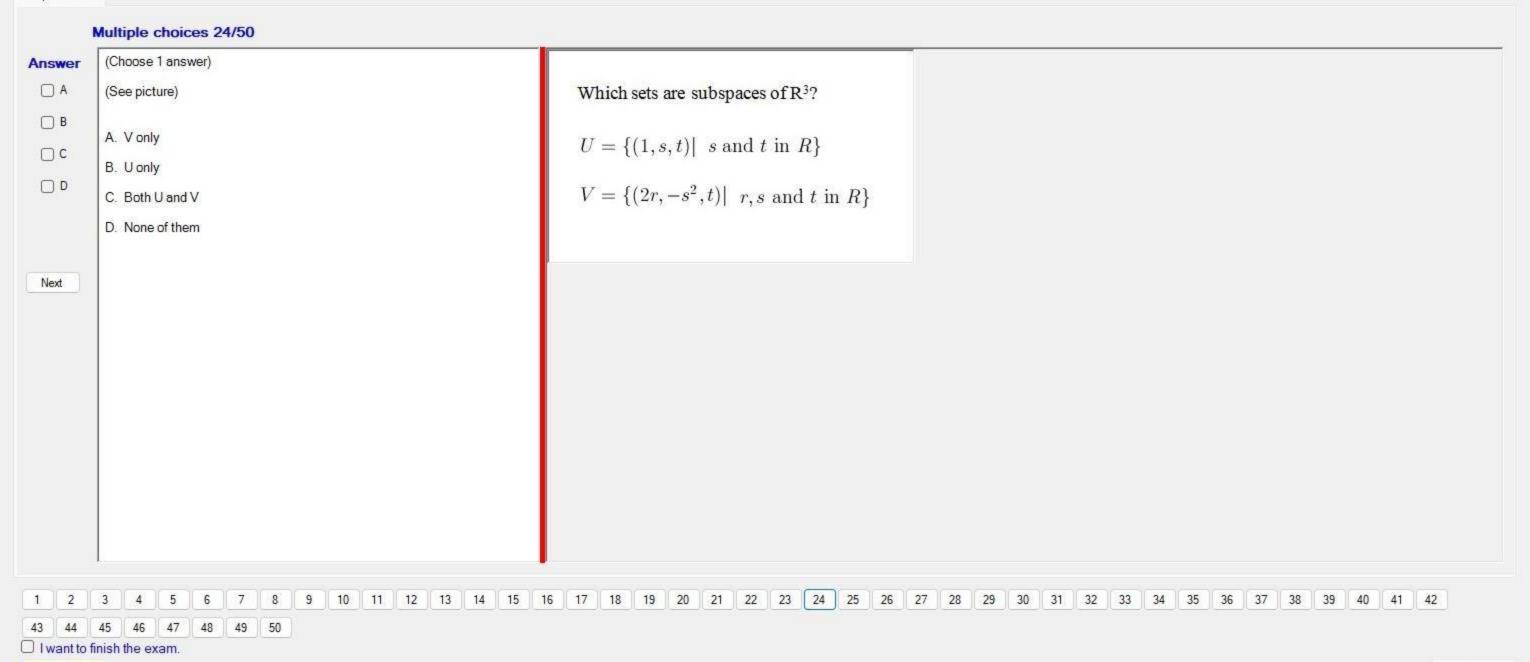


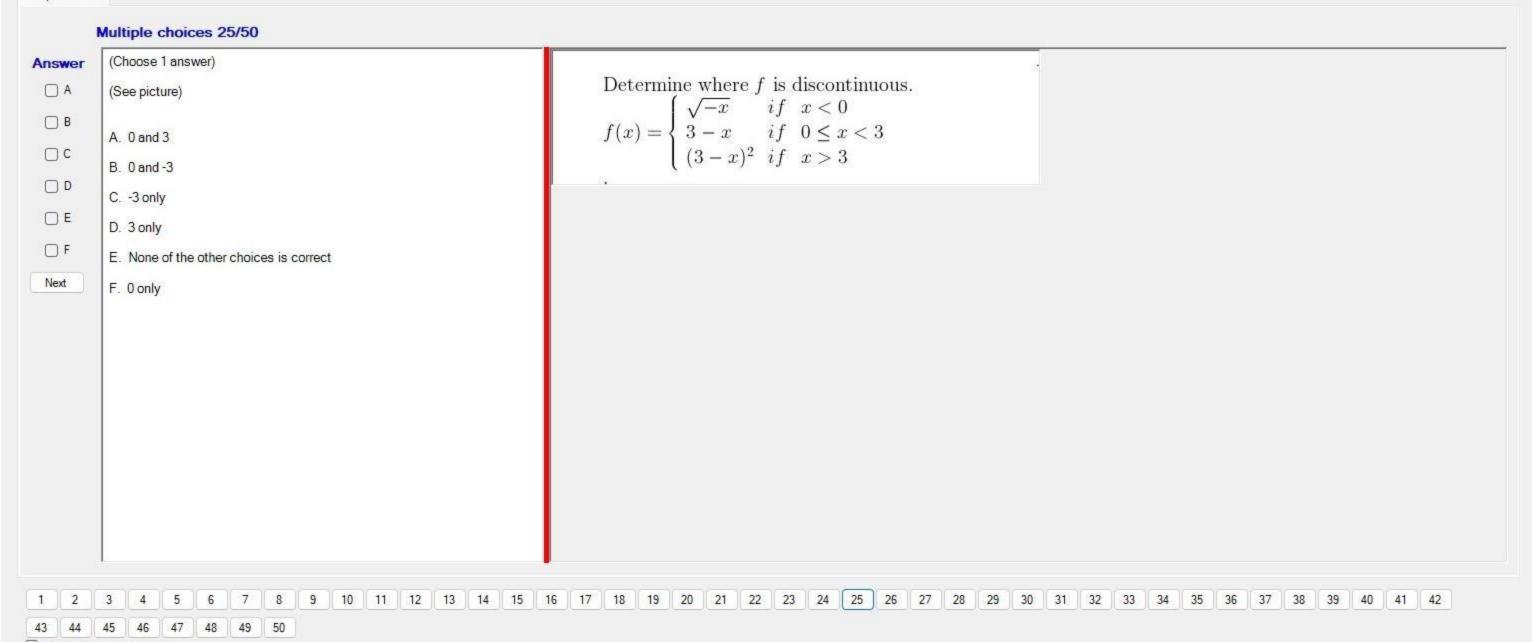
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42

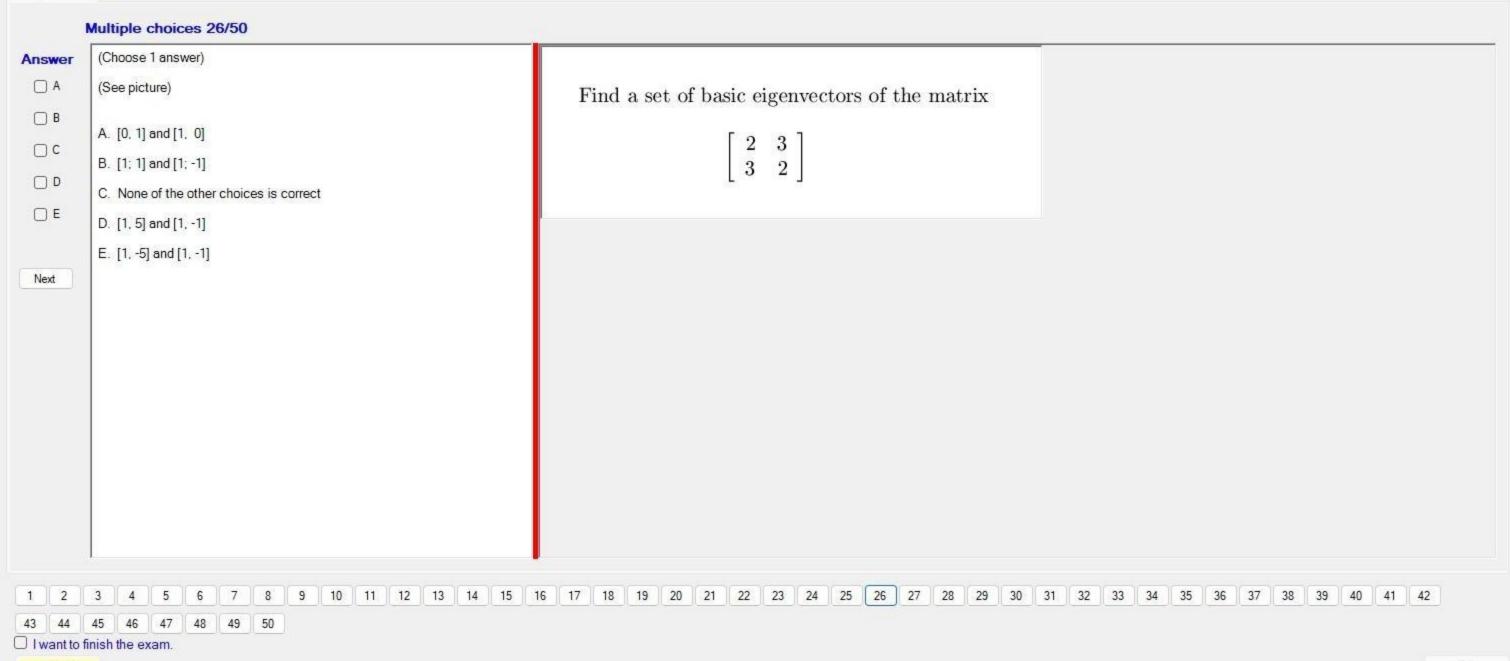
43 44 45 46 47 48 49 50

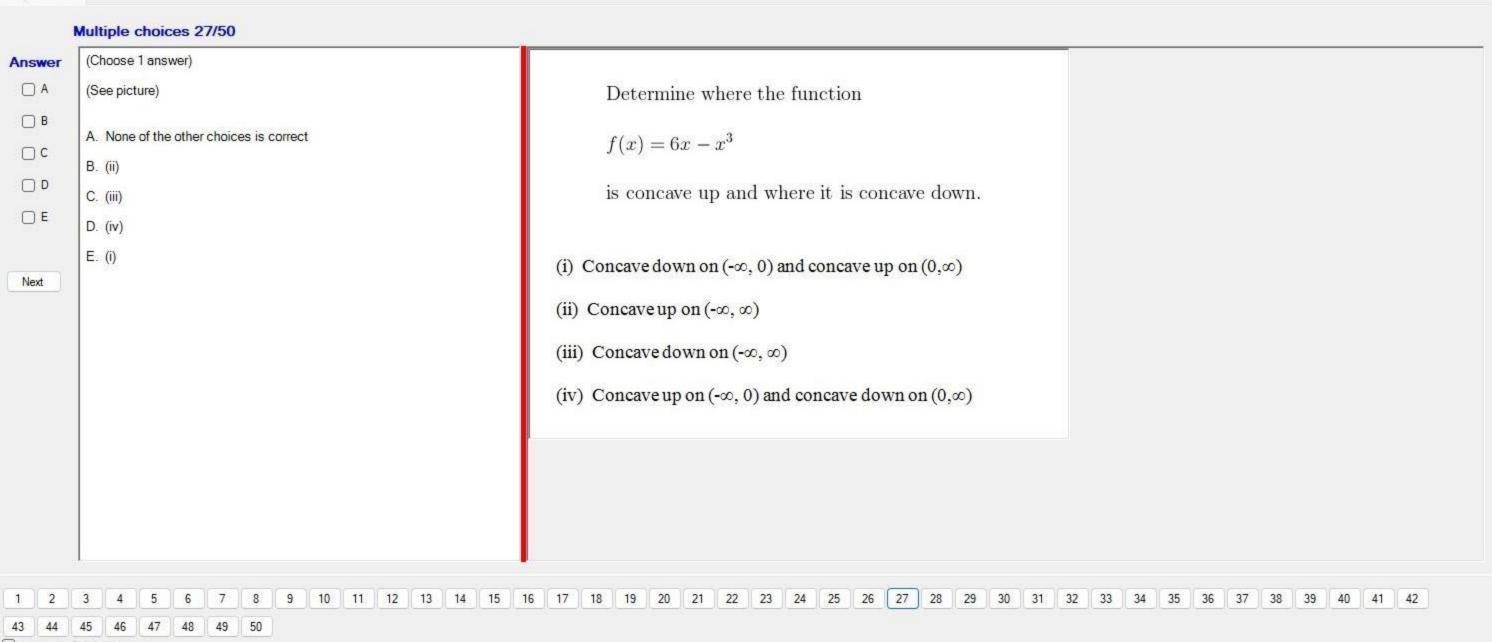
I want to finish the exam.

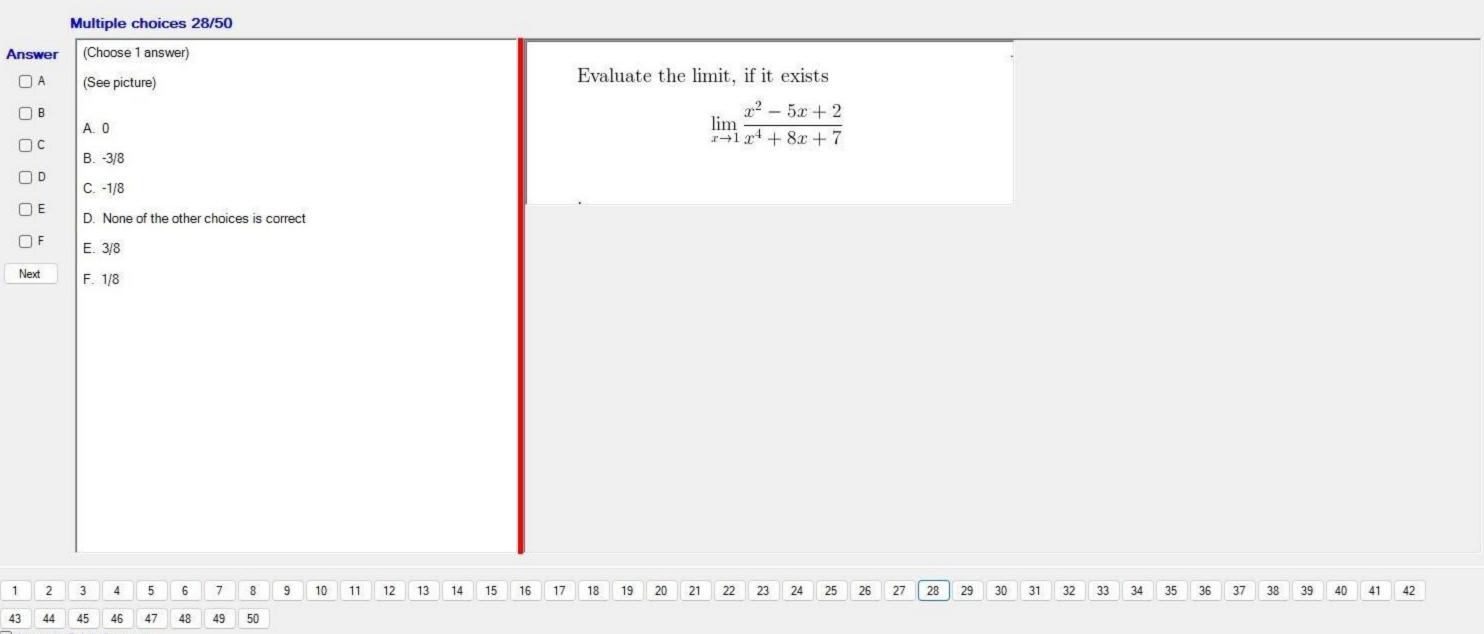


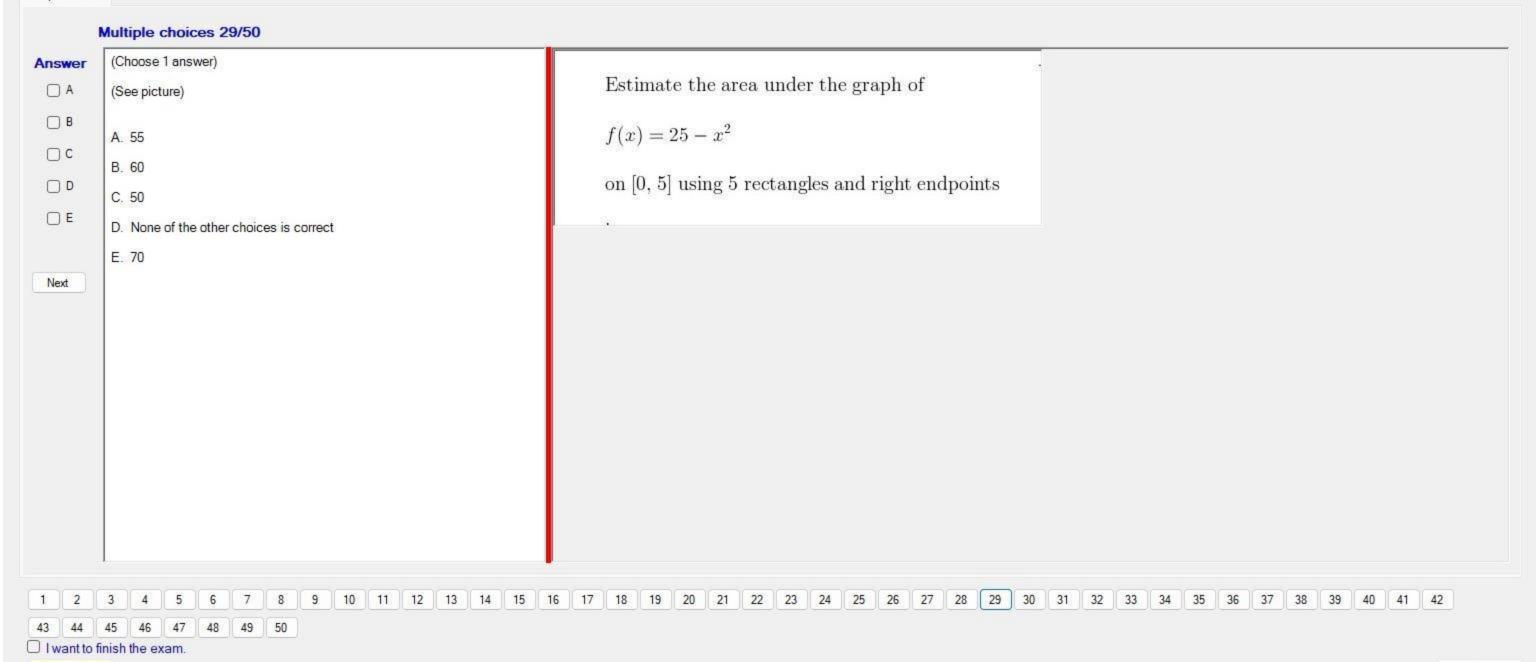


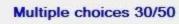












C. 1.8989

D. 1.9063

E. 1.9686

F. 1.8686

Answer

(Choose 1 answer)

(See picture)

A. 1.9898

B. None of the other choices is correct

Use Newton's method with the specified initial approximation x_1 to find x_3 , the third approximation to the root of the given equation. (Give your answer to four decimal places.)

other choices is correct
$$x^4 - 13 = 0, \quad x_1 = 2$$

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 4

43 44 45 46 47 48 49 50

I want to finish the exam.

Finish

O D

□ E

□ F

Next



Answer

□ A

□ B

□ C

O D

□ E

Next

(Choose 1 answer)

(See picture)

- A. Absolute maximum: -1/4, absolute minimum: -4
- B. Absolute maximum: -1/2, absolute minimum: -4
- C. None of the other choices is correct
- D. Absolute maximum: -1/4, absolute minimum: -2
- E. Absolute maximum: -1/2, absolute minimum: -2

Find the absolute maximum and absolute minimum values of

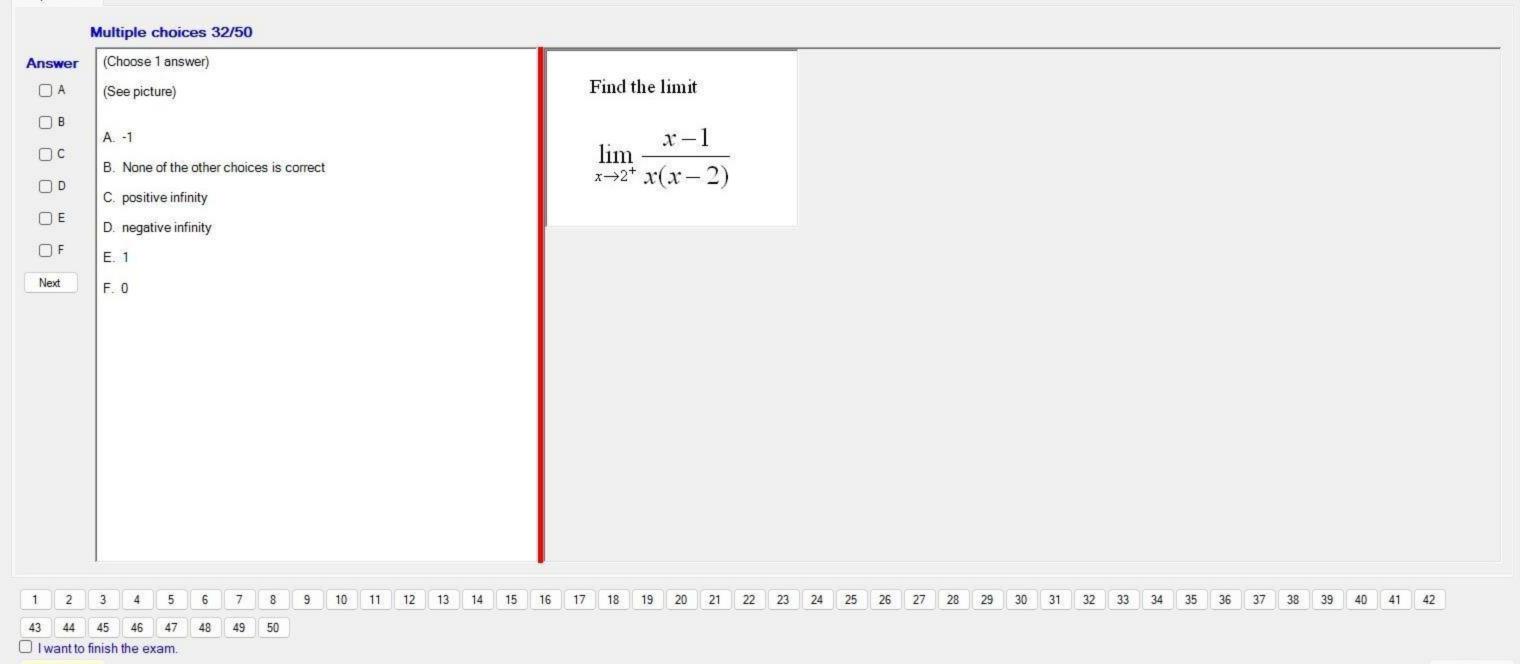
$$f(x) = \frac{-1}{x^2}$$

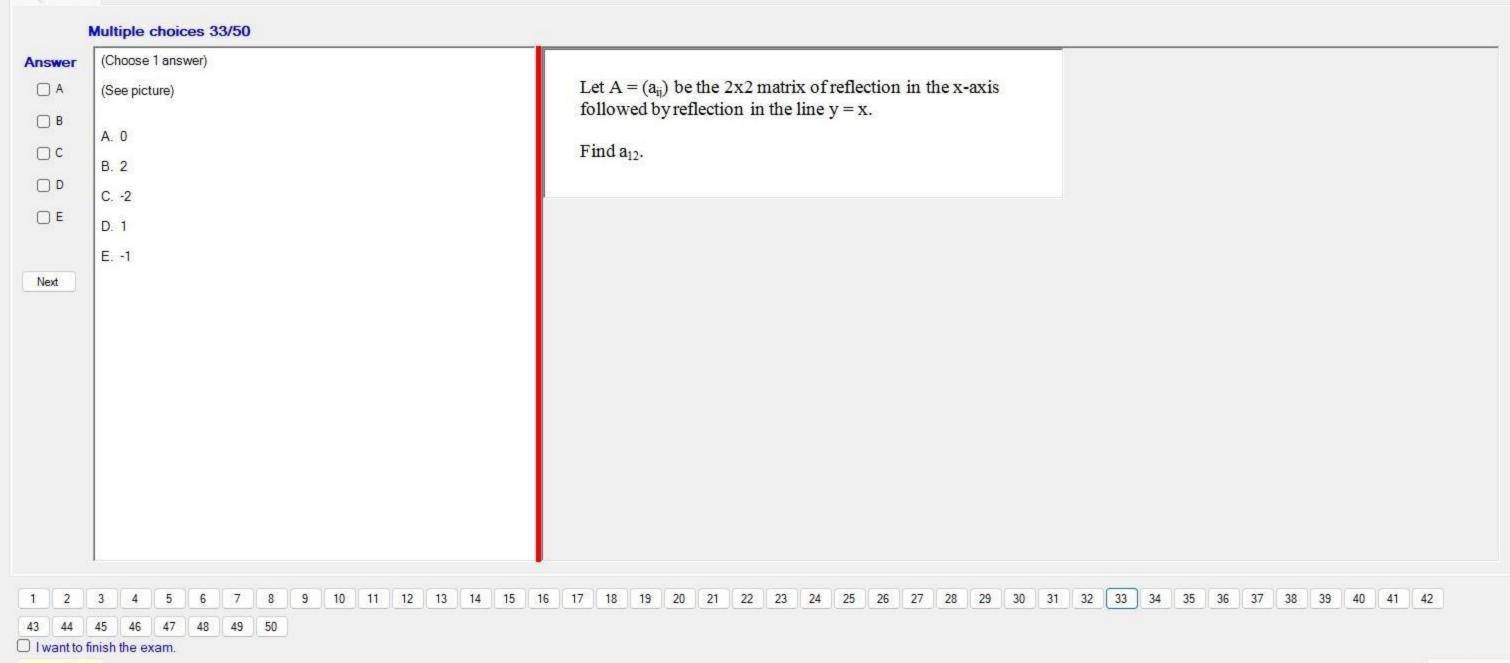
on [1/2, 2].

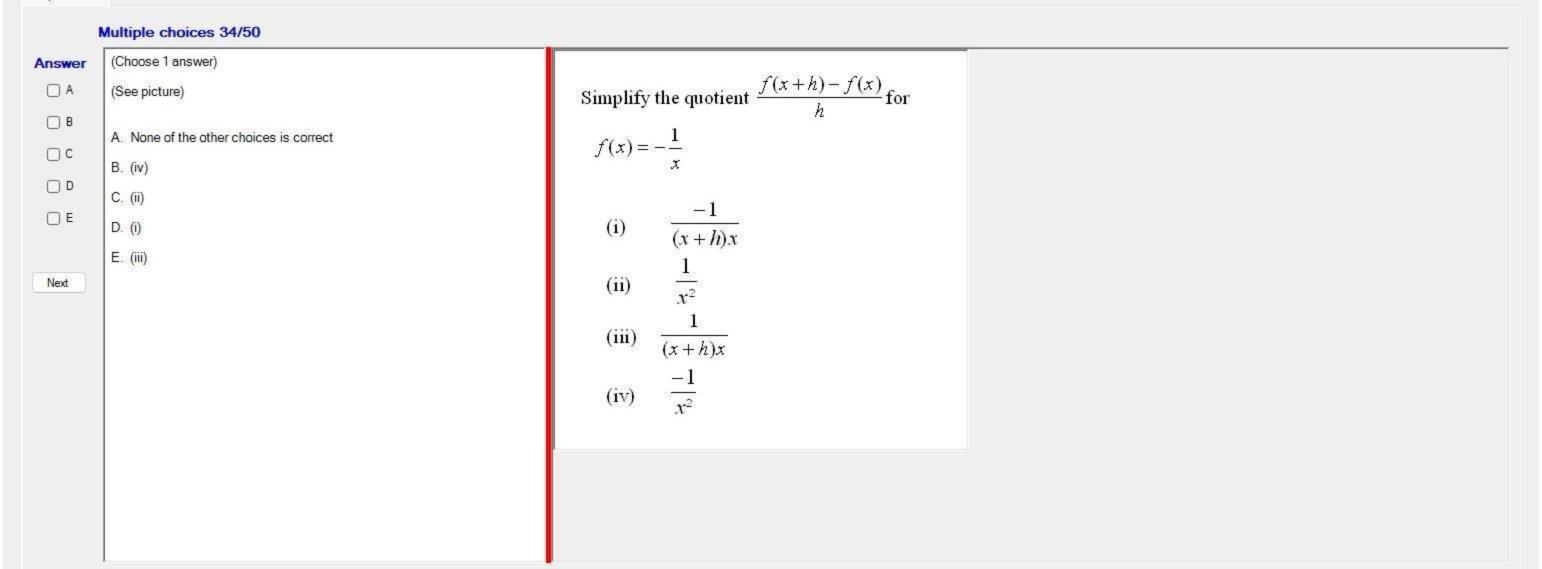
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42

43 44 45 46 47 48 49 50

I want to finish the exam.



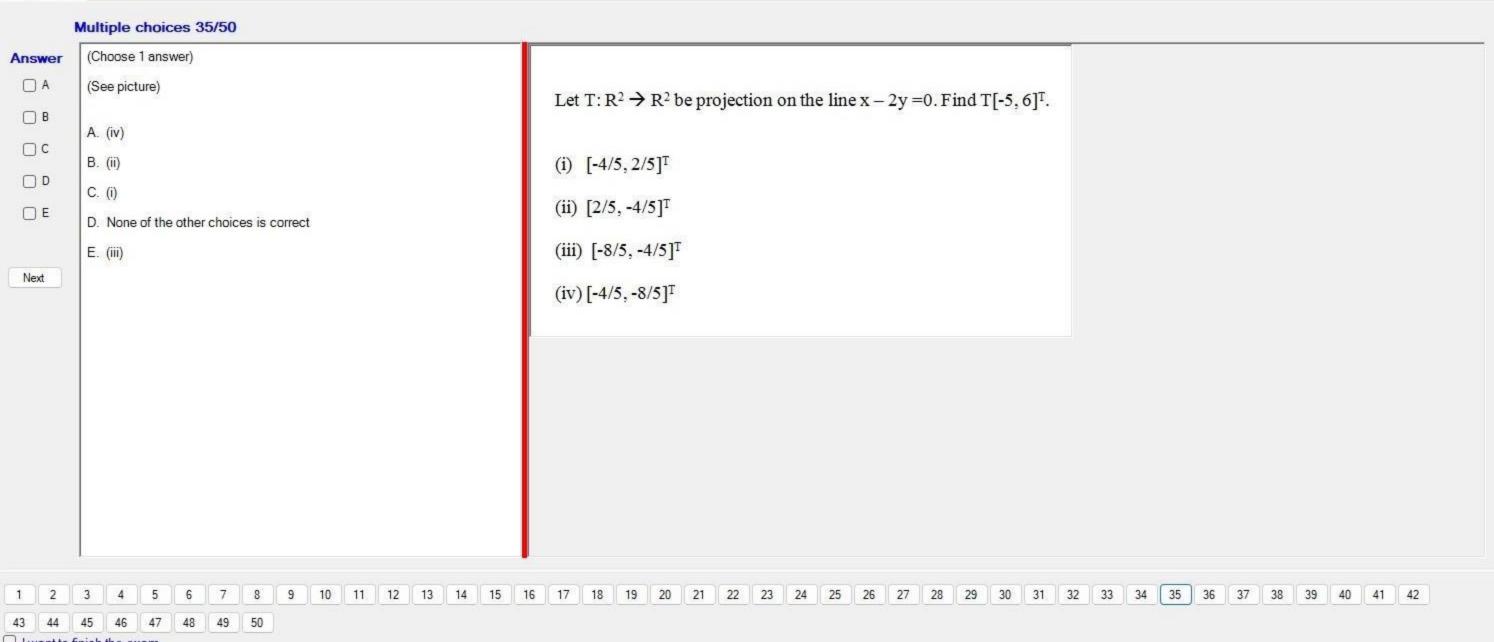


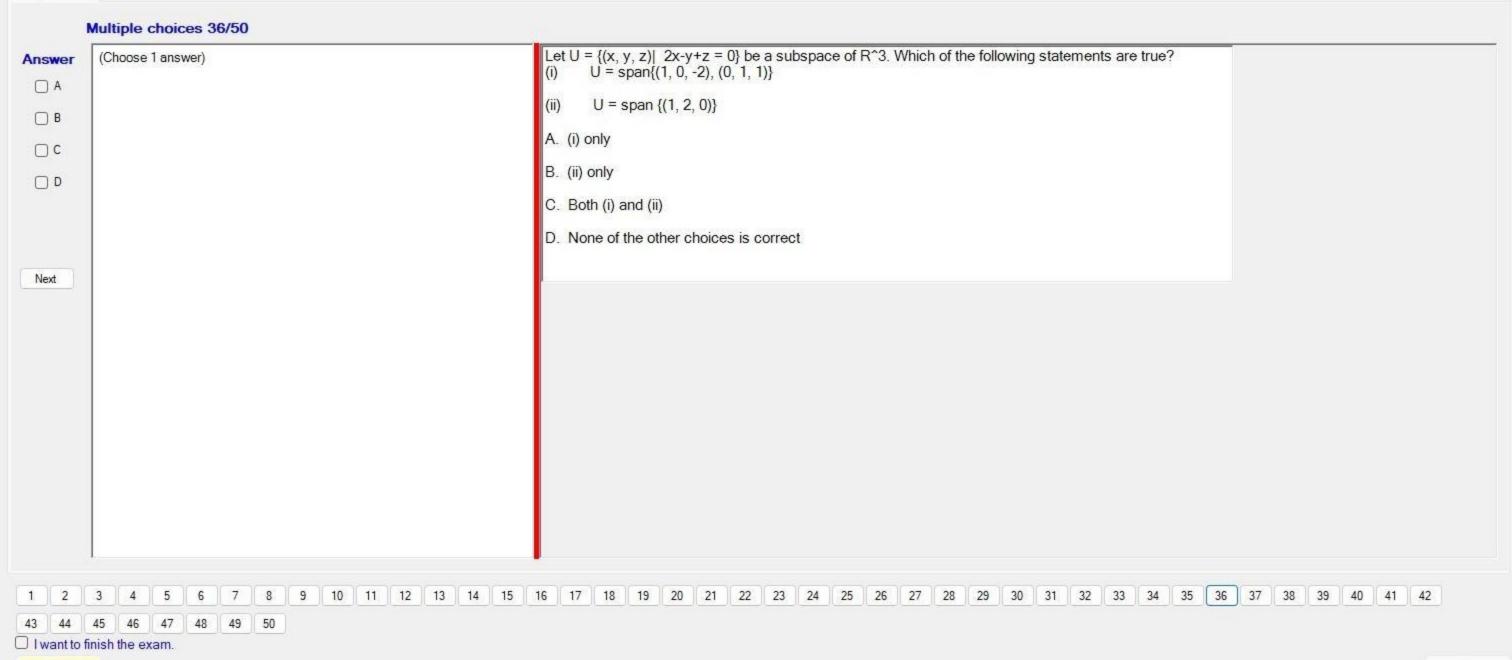


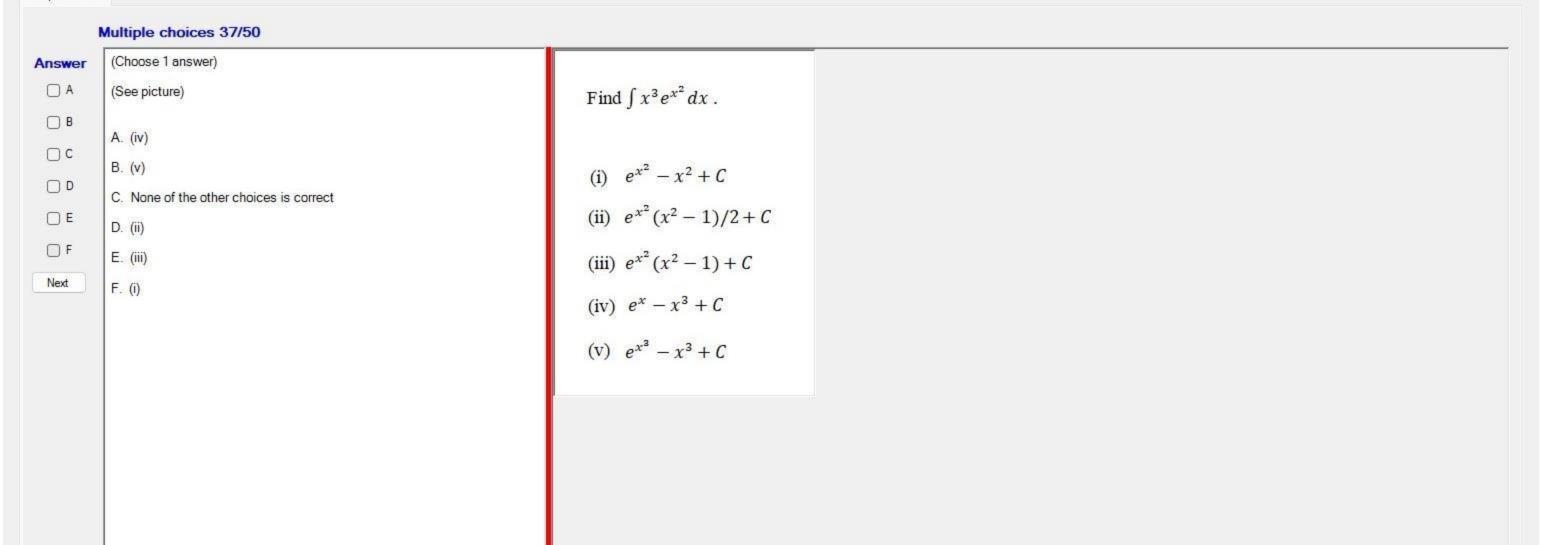
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42

43 44 45 46 47 48 49 50

I want to finish the exam.







21 22

18

19

20

23 24

25

26 27

28

29

30

31

32

33 34

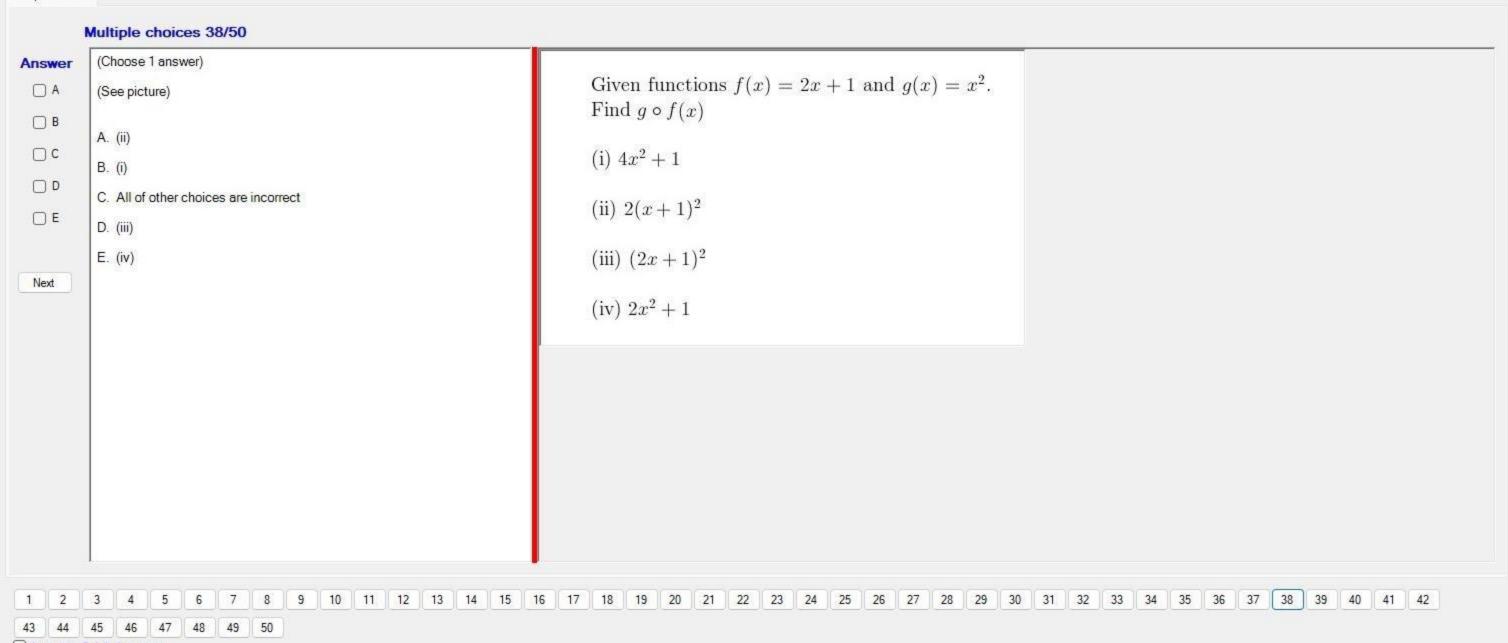
35

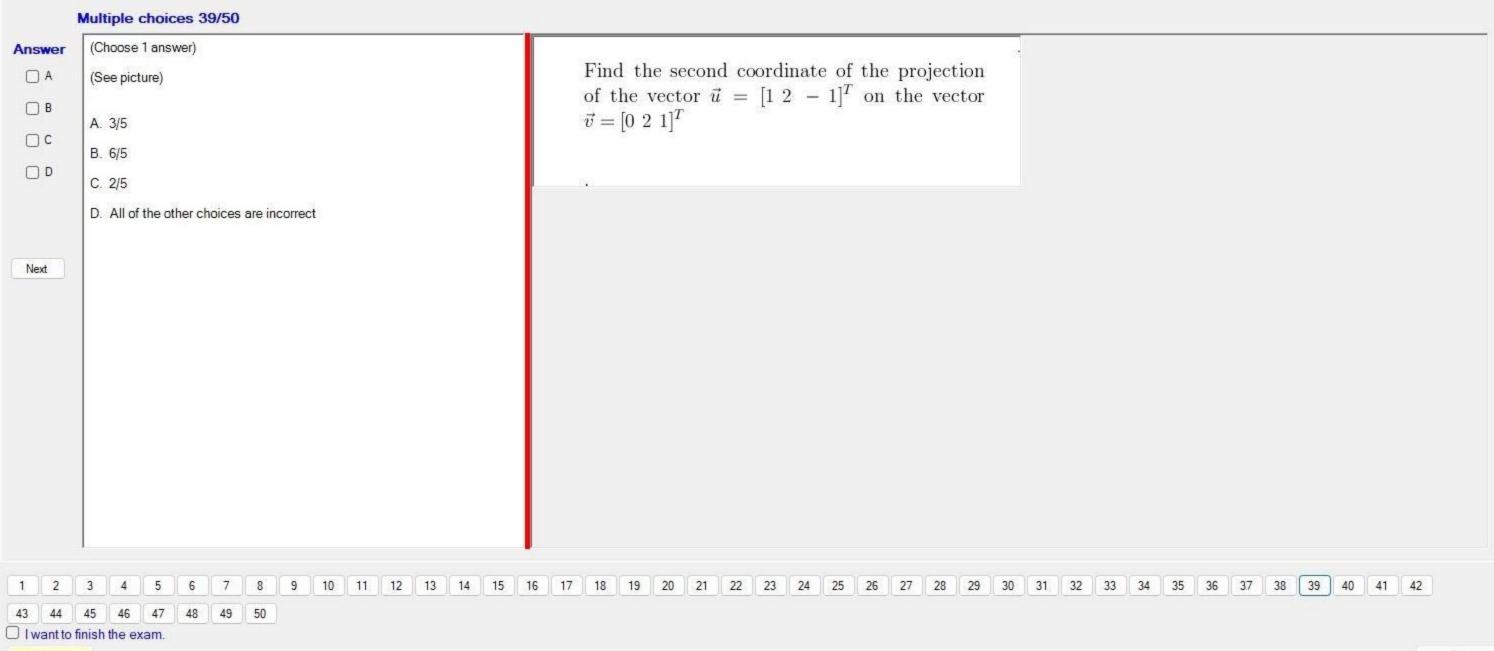
36 37 38 39 40 41 42

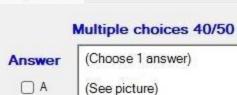
43 44 45 46 47 48 49 50

10 11 12 13 14 15 16 17

I want to finish the exam.







E. 7.2, -7.2

B. None of the other choices is correct

□ B

A. 3.6, -3.6 O C

O D

C. 36 OE D. 72

Next

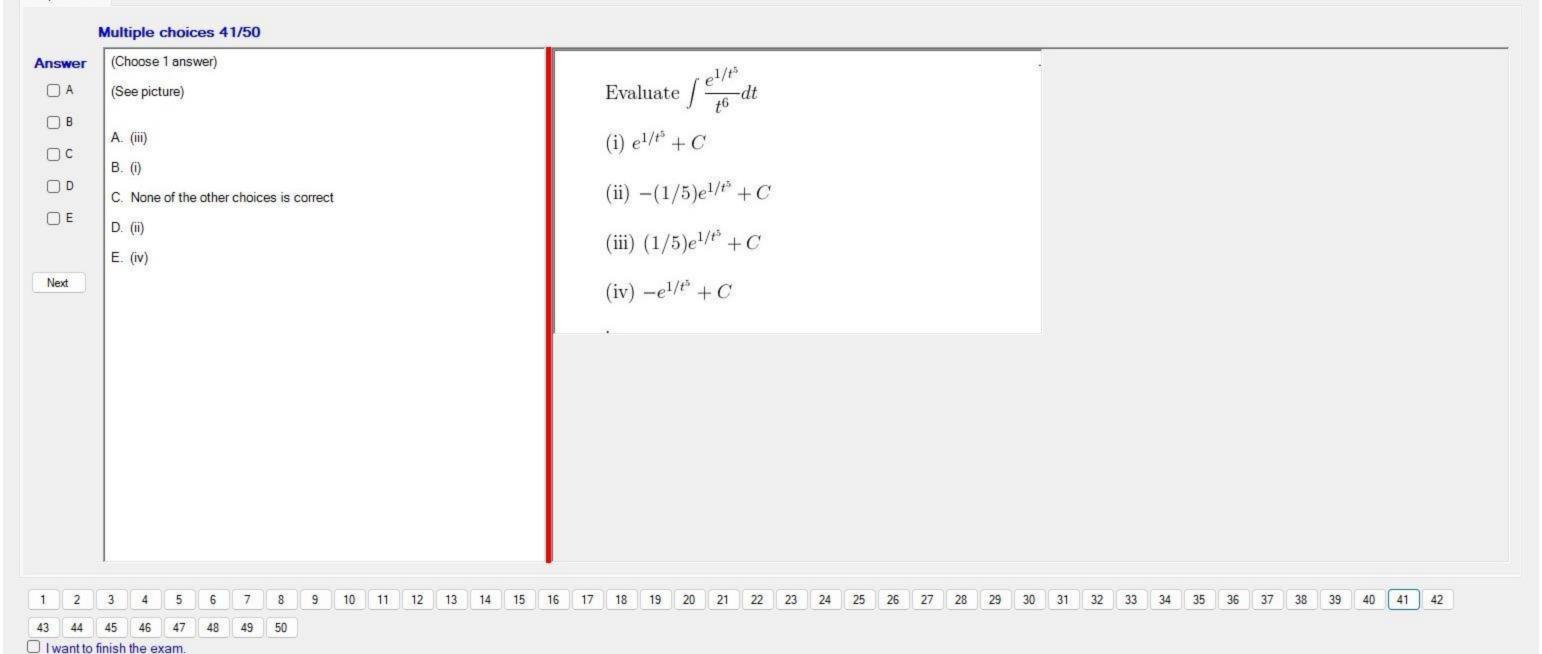
Assume that x = x(t), y = y(t) and z = z(t) such that

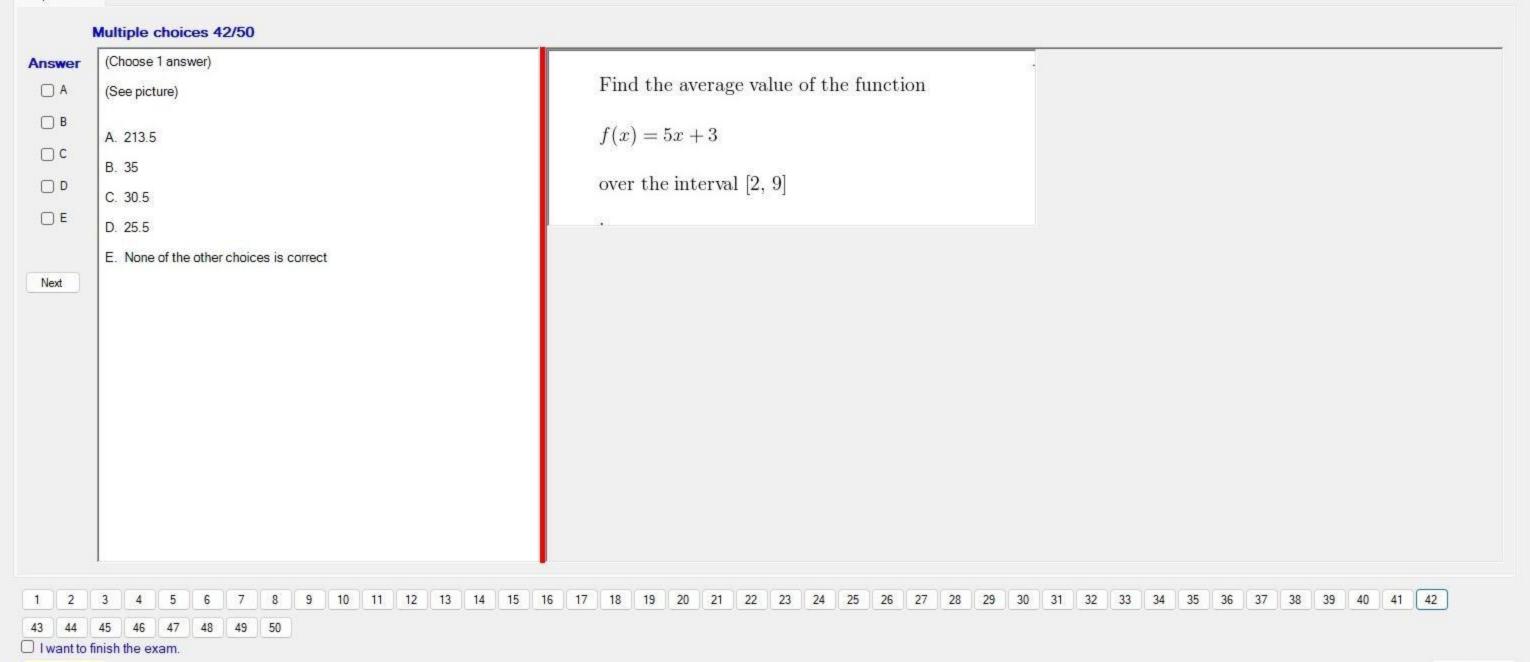
$$[z(t)]^2 = [x(t)]^2 + 4[y(t)]^2.$$

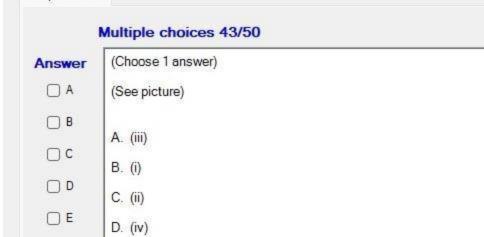
Compute
$$\frac{dz}{dt}$$
 when $x = 3$, $y = 2$, $\frac{dx}{dt} = 4$ and $\frac{dy}{dt} = 3$.

48 49 50

I want to finish the exam.







E. All of the other choices are incorrect

Given the relation $x^2 + xy^2 = 3$, find dy/dx.

(i)
$$-\frac{y}{2x}$$

$$(i) - \frac{y}{2x}$$

$$(ii) - \frac{2x}{y^2}$$

(iii)
$$-\frac{1}{y}$$

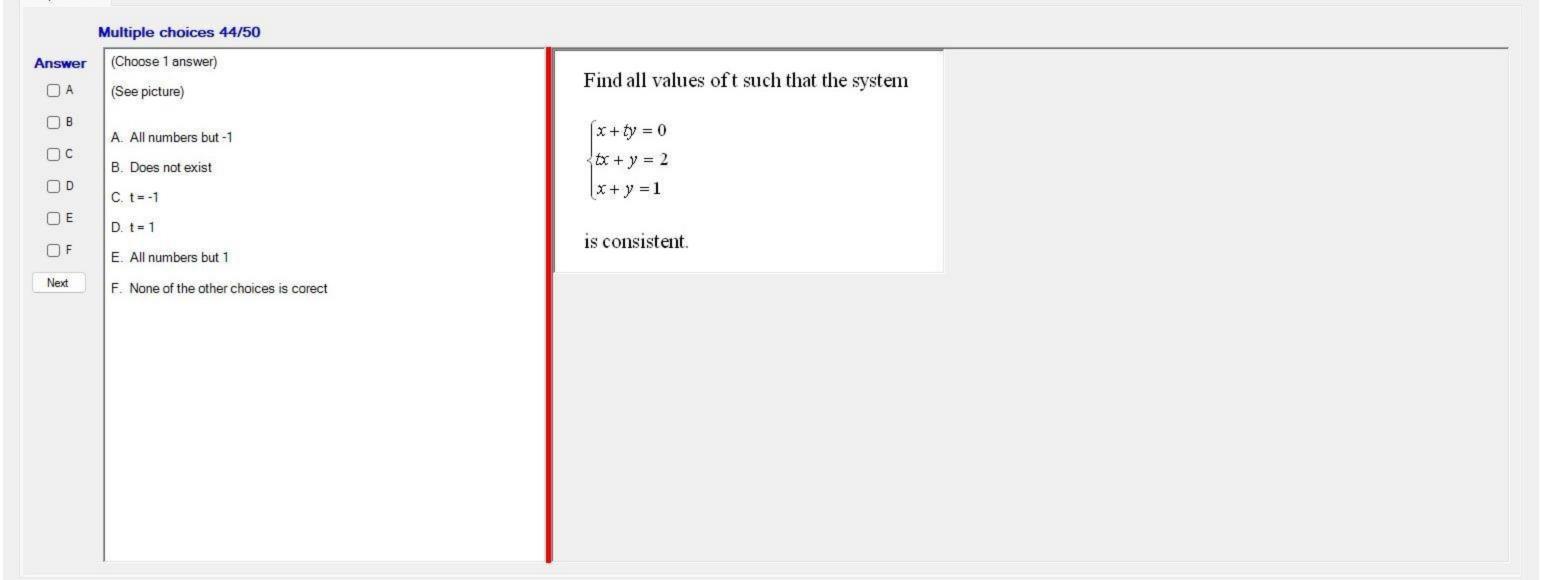
$$iv) - \frac{y^2 + 2x}{2xy}$$

10 11 12 13 14 15 16 17 20 21 22 23 24 25 26 27 28 29 30 32 33 34 35 36 37 38 39 40 41 42 18

46 47 48 49 50

I want to finish the exam.

Next



9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

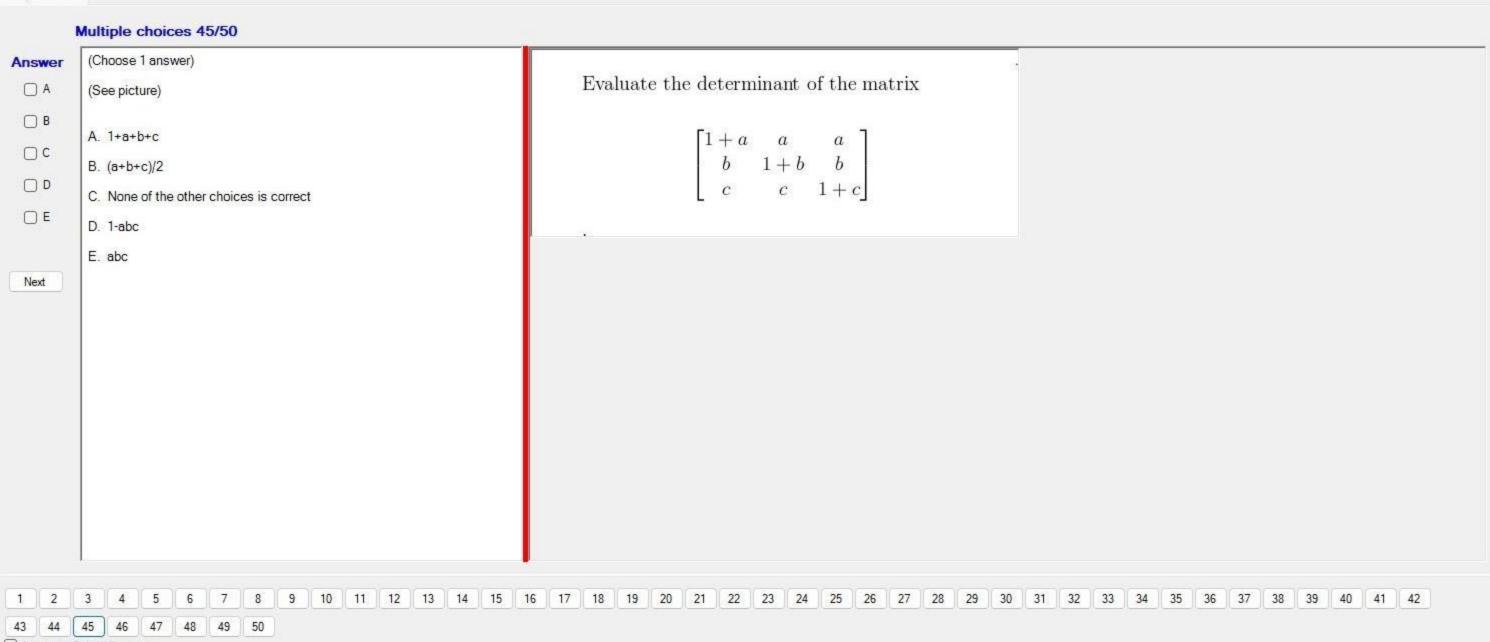
I want to finish the exam.

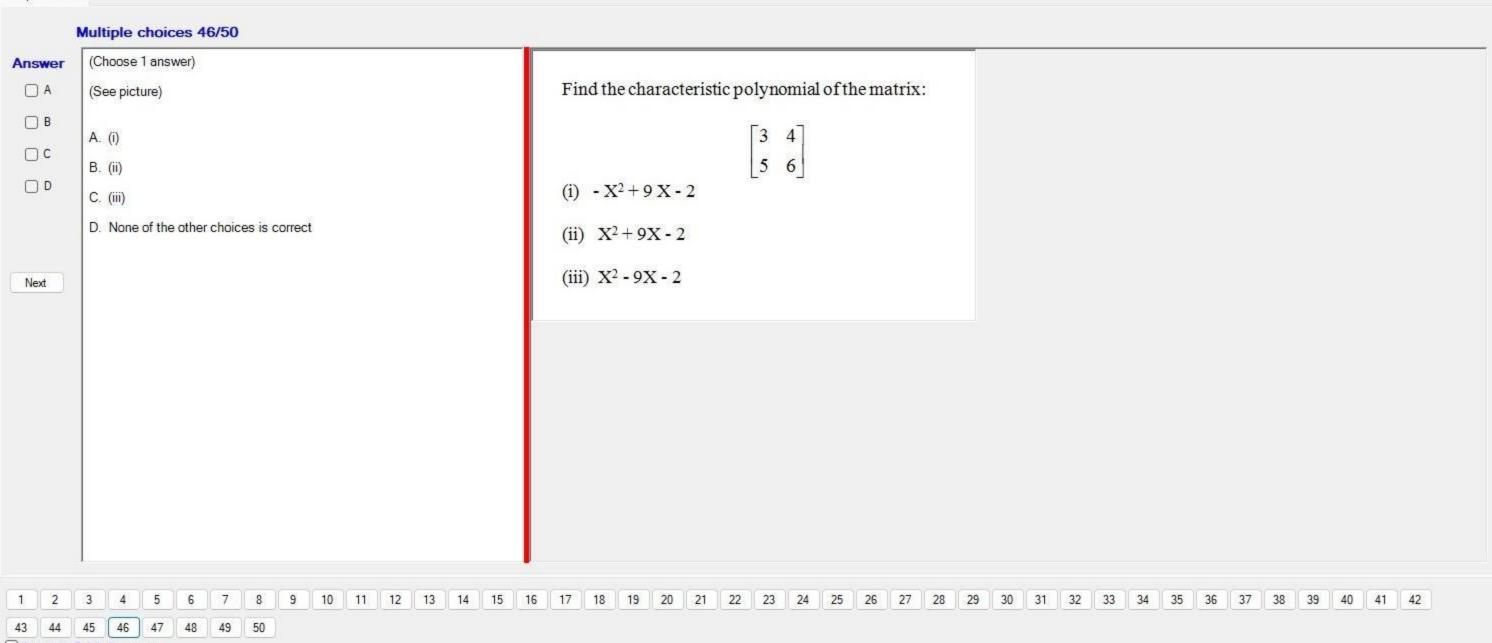
46

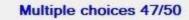
47

48 49 50

29 30 31 32 33 34 35 36 37 38 39 40 41 42







E. None of the other choices is correct

A. (iv)

B. (iii)

C. (i)

D. (ii)

Answer

□ A

□ B

□ c

O D

□ E

Next

(Choose 1 answer)
(See picture)

Express the limits as a definite integral over [0,2]

$$\lim_{n \to \infty} \sum_{i=1}^{n} (5(x_i^*)^2 - 3(x_i^*)^3) \Delta x$$

(i)
$$\int_{1}^{2} (5x^2 - 3x^3) dx$$

(ii)
$$\int_0^2 (5x^2 - 3x^3) dx$$

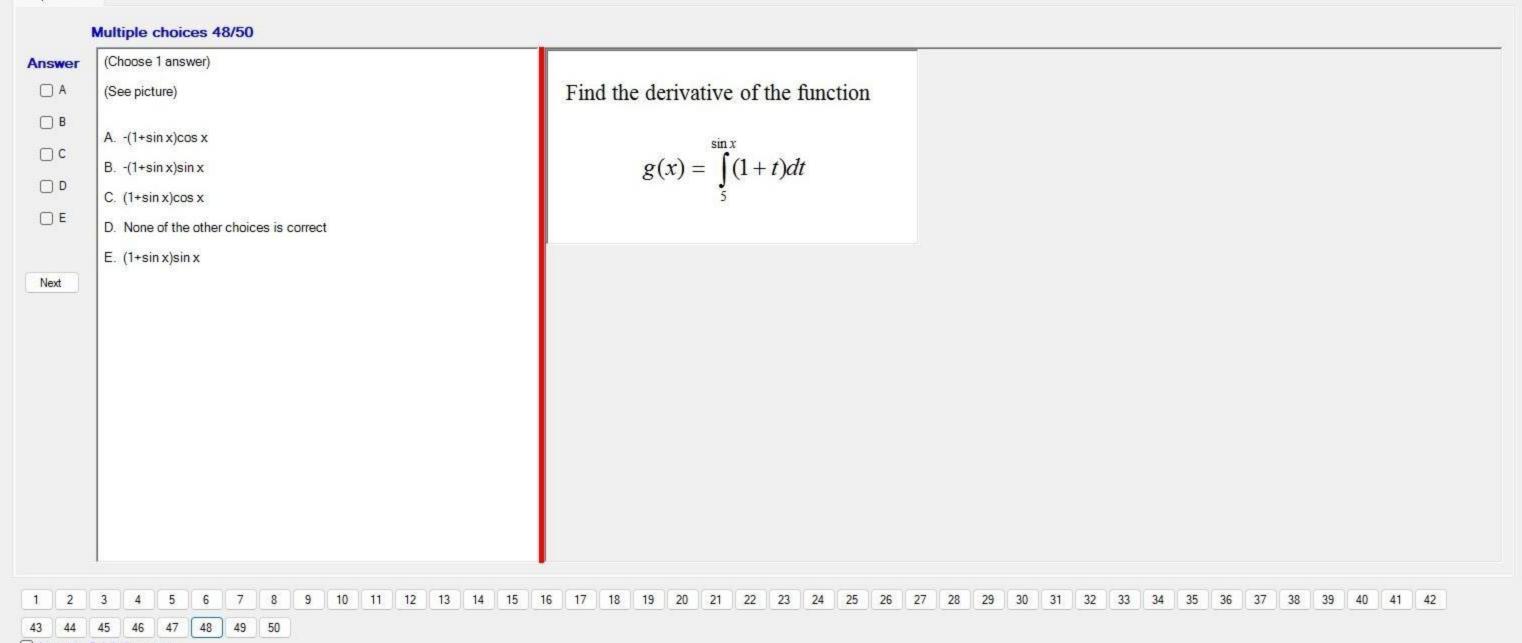
(iii)
$$\int_0^1 (5x^2 - 3x^3) dx$$

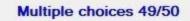
iv)
$$\int_0^2 (4x^2 - 3x^3) dx$$

 1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 4

43 44 45 46 47 48 49 50

I want to finish the exam.





Answer

(Choose 1 answer)

□ A

(See picture)

□ B

A. The system of linear equations is consistent for all a, b, and c

OD

B. 3a-7b+11c = 0

E. 3a-7b-11c = 0

□ E

C. 3a-7b-11c is non-zero

D. 3a-7b+11c is non-zero

Next

Find the condition on a, b, c such that the following system of linear equations is inconsistent

$$\begin{cases} x - 3y + z = a \\ 2x + 5y - 6z = b \\ x + 4y - 2z = c \end{cases}$$

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42

43 44 45 46 47 48 49 50

I want to finish the exam.

