

Math pre-exam Quiz

8 Questions

1. Solve the simultaneous equations below:

$$5x+3y=41$$

$$2x+3y=20,$$

then evaluate $x+y$

0/54 **A** 5

8/54 **B** 7

42/54 **C** 9

1/54 **D** 11

3/54 **E** 13

2. Solve the simultaneous equations below:

$$x+7y=64$$

$$x+3y=28,$$

then evaluate $x-y$.

2/54 **A** 7

1/54 **B** -7

10/54 **C** 8

Burada doru cevap -8 olacak, $x=1$, $y=9$ bulmutuk

41/54 **D** -8

0/54 **E** 10

3. Solve the simultaneous equations below:

$$4x-4y=24$$

$$x-4y=3,$$

then evaluate $x.y$

1/53 **A** -4

1/53 **B** 4

1/53 **C** -6

6/53 **D** 6

44/53 **E** 7

4. David buys 2 scones and 2 coffees in a shop for £18. Ellie buys 3 scones and 2 coffees in the same shop, costing £22. How much would buying 1 scone and one coffee cost in this shop?

1/52 A £7

4/52 B £8

42/52 C £9

3/52 D £10

2/52 E £11

5. Alan and Connor have £6.70 in total. Alan has £1.70 more than Connor. Set a pair of simultaneous equations and solve them to find out how much each person has.

42/52 A Alan £4.20, Connor £2.50

1/52 B Alan £3.50, Connor £3.20

8/52 C Alan £1.70, Connor £5.00

0/52 D Alan £5.00, Connor £1.70

1/52 E Alan £2.20, Connor £4.50

6. Solve the following equation. Write down the solution for every step.

$$(2x+6) = (-x=3)/4$$

51/51 | Db

K

multiply both sides by 4 open the brackets

Emir a.

firstly apply cross multiplication
and second write the answer
third throw other way knowns and unknowns
and lastly divided two sides by 9
 $x = -3$

N.G

$4(2x+6) = -x-3$ multiply out the brackets
 $8x+24 = -x-3$ collecting like terms
 $9x+24 = -3$
 $x = -27/9$ minus twenty seven divided by nine
 $x = -3$ equals minus three

Arda Günaştı

$x = -3/4$

. / BG / Bg11 / Brn / Daryl Jr / RK

.

Zerin

Multiply both sides of the equation by 4 to get rid of the division by 4
Add x to both sides to move the x term from the right side to the left side

ege tas

$2x+6$ equals $-x-3/4$. we do cross-multiplying. $8x+24$ equals $-x-3$. Take $-x$ to the left side of the equation and take 24 to the right side of the equation. $9x$ equals -27 . I need to simplify. Answer is x equals -3

furkan

a

E6

firstly I multiply the both sides 4
 $8x+24 = -x-3$
to move to the other side of the equation $-x$ and -3
 $7x = 21$, so we divide both sides by 7 and get $x=3$

E

I wrote a denominator and multiplied inside and outside
I equalized the answers that came out

answer: $x=3$

Mc

it's clearly

$$(-x-3) = (8x+24)$$

so i threw the +24 to the left side and -x to the right side.

$$\text{so it's: } 9x = -27$$

and i simplified it and

i got -3

Nesibe A

$$4(2x+6)=-x-3 \text{ (multiply both side by 4)}$$

$$8x+24=-x-3 \text{ (multiply out the bracket)}$$

$$9x=-27 \text{ (collect alike terms one side)}$$

$$x=-3 \text{ (divide both side by 9)}$$

dyy

we need to do multiple cross and after we need to collect like terms it will be

$-9x=21$ and we need to leave x alone we divide each side by -9 and final result is

$$7/-3$$

YB / yagmur / Ö.y

$$x=-3$$

Eliffff

$$4x(2x+6)=-x-3$$

$$8x+24=-x-3.$$

$$9x=-27$$

$$x=-3$$

Eren K

To get rid of the fraction, multiply both sides of the equation by 4

$$4(2x + 6) = -x - 3$$

Distribute the 4 on the left side

$$8x + 24 = -x - 3$$

Add x to both sides:

Subtract 24 from both sides

$$9x = -27$$

divide by both sides by 9

$$x=-3$$

HY / Mete

$$4(2x+6)=-x-3$$

$$8x+24=-x-3$$

$$8x+x=-3-24$$

$$9x=-27$$

$$x=-3$$

ayk

$2x+6=(x-3)/4$ firstly cross multiply

equals $8x+24=-x-3$ then

nine x equals minus twenty seven $9x=-27$

equals -3

H

$$2x+6/4=-(x-3)/4$$

$$2x+6/1-(-x-3)/4-$$

$$(8x+24)=(-x-3)$$

$$9x=27$$

$$x=-3$$

Nur B

$$(2x+6)/1=(-x-3)/4$$

$$(8x+24)=(-x-3)$$

$$9x=-27$$

$$x=-3$$

Kk

$$4(2x + 6) = -x - 3$$

$$8x + 24 = -x - 3$$

$$8x + x + 24 = -3$$

$$9x = -3 - 24$$

$$x = -3$$

G

$$4(2x+6)=-x-3$$

$$8x+24=-x-3$$

$$8x+x+24=-3$$

$$9x+24=-3$$

$$9x=-3-24$$

$$9x=-27$$

$$x=-27/9$$

$$x=-3$$

Samet A.

$$8x + 24 = -x - 3$$

$$8x + x + 24 = -3$$

$$9x = -3 - 24$$

$$x=-3$$

Ege b

1-)Multiply both sides by 4= $8x+24=-x-3$

2-)collect similar terms $9x=-27$

3-)solution is $x=-3$

dilara

firstly we need to multiply $(2x+6)$ with 4. so our expression turns to $8x+24$ equals $-x-3$. and then we need to combine the x terms. so this simplifies to $9x+24=-3$. and after that we need to move the constant 24 from the left side to right side. so our expression turns to $9x=-27$. and finally we need to divide both sides by 9. so our answer is $x=-3$

7488 / 7488 / HH

$$-3$$

dilara

1)cross multiplication

2)subtract $-x$ from both sides

3)subtract 24 from both sides

4)divide both sides by 9

the solution is $x = -3$

Sude Ft

$$2x+6=-x-3/4$$

$$-x-3=8x+24$$

$$-9x=27$$

$$-x=3$$

Ali Arda G.

First of all we have to cross multiply. Then we have to group the alike terms. Then divide both sides by 9 because x's coefficient is 9. x equals to minus three.

Mümüne

first two x plus six equal four distribute in to brackets equal negative fourx maynis twelve six x equal six $x = 1$

g

$$x=3$$

Brn

$$4(2x+6) = -x-3$$

$$8x+24 = -x-3$$

$$9x = 27$$

$$x = 3$$

ai

1) cross multiply each term

$$2) 8x+12=-x-3$$

3) take to -x the other side and take to +12 the other side

$$4) 9x=-15$$

5) divided both side by 9

$$6x=-15/9$$

bk

$$4(2x+6) = (-x-3)$$

$$8x+24 = -x-3$$

$$9x = -27$$

$$x = -3$$

/N

$$2x+6=-x-3/4$$

$$2x+6/4 = -x-3/4$$

$$x-3/4$$

Caner

multiply both sides by 4 add x to both sides subtract 24 divide by 9 answer -3

NB

multiplying each side with 4 it makes $(8x+24) = (-x-3)$

collecting the similar factors it makes $9x = -27$

divide both sides by 9 and it gives $x = -3$

engin

$$8x+24 = -x-3 \text{ (multiply each side by 4)}$$

$$9x = -27 \text{ (collect the like terms)}$$

$$9x = -27 \text{ (collect the like terms)}$$

$$x = -3$$

YGZ

$$4(2x+6)=-2-3$$

$$8 + 24 = -x - 3$$

$$8x + x = -3 - 24$$

$$9x = -27$$

$$X = -3$$

YAKUP ŞAHKULUBEY

buney

7. Suppose the supply of a good is given by the equation $Q = -10 + 0.5P$. And the demand for a good is given by $Q = 50 - P$.
- Find the equilibrium quantity and equilibrium price.
 - The government decides to levy a tax of £6 per unit on the good, to be paid by the seller. Find the equilibrium quantity and price after the tax. Comment on how much sellers would receive per good after the tax.

49/49 | Db

Mc
43

Daryl Jr
q=10 p=40

Nesibe A
Quantity =40
Price=10

E6
Firstly Equilibrium is when supply=demand
 $-10 + 0.5P = 50 - P$
 $1.5P = 60 \Rightarrow P=40$
 $Q = 50 - 40 = 10$
 Secondly Tax 6 reduces supply $Q = -13 + 0.5P$
 $-13 + 0.5P = 50 - P$
 $P = 42$
 buyers 42 42-6 Q=8

. / Arda Günaştı / Bg11 / Brn / Brn / Mete / N.G / NB / RK / YAKUP
 ŞAHKULUBEY / ayk / bk / yagmur

ege tas
I dont know

Ali Arda G.
First of all we must equalize the supply and demand. When we did that we found the P is 40. This is equilibrium quantity.

Eliffff
 $-10 + 0.5P = 50 - P$
 $0.5P + P = 60$
 $1.5P = 60$
 $P = 40$
 $Q = 10$

HH
 40£. 10.
 42£. 8
 36£

Zerin

-
dilara

a) $Q=40$
 $P=10$

b) $Q=54$
 $P=23$

dilara

a) equilibrium quantity= 10 equilibrium price=40
b) ?

Kk

goverment always wins

Ö.y

I don't understand

E

?

furkan

e

Samet A.

cant find the answer

Ege b

a-)40£
b-)42£

Eren K

A)
 $p=40$
 $Q=10$
B)
 $P_b=42$
 $P_s=36$
 $Q=8$

G

$Q_s = -10 + 1/2P$
 $Q_d = 50 - P$
 $-20 + P = 2Q_s$
 $50 - P = Q_d$
 $30 = Q$

Nur B

$Q=10$
 $p=40$

HY

10dan 8'e dustu

BG

Equilibrium quantity = 10

Equilibrium price = 40

/N

$$Q_s = -10 + 1/2P$$

$$Q_d = 50 - P$$

7488 / 7488

$$P = 40$$

Mümüne

$$a = 4$$

Sude Ft

equilibrium price = 40

equilibrium quantity = 10 units

g

a) 100

b) 40

YB

equilibrium price is 10

after the tax 16

ai

$$Q =$$

engin

A) Quantity is 10 | Equilibrium is 40

B) Price after tax is 34 | Equilibrium Quantity is 16

Caner

A) Q:10 P:40

B)

dyy

idk

H

$$p = 40$$

$$Q = 10$$

YGZ

$$P = 10, Q = 10 \text{ (before tax); } P_s = 36,0 = 8$$

8. Albie is training for a marathon. He jogs either route A or route B. During April, he jogs route A nine times and route B five times. Route B is 8 miles longer than Route A. In total, he jogs 89 miles in April. In May, he will start jogging Route C. Route C is 20% longer than Route B. Work out the length of routes A, B and C.

42/42



dilara

a=3.5
B=11.5
C=13.8

Ege b

A=3.5
B=11.5
C=13.8

. / Arda Günaştı / BG / Bg11 / E6 / Eliffff / G / HY / Mete / RK / YAKUP
ŞAHKULUBEY / YB / bk / yagmur

furkan

A=9
B=5
C=9

HH

b 10'5
c 13'8
a 4'5

Kk

z

ege tas

I dont know

Mc

a 5,4 mil
b 8 mil
c 9.6

dilara

A=4,5 miles
b=11,5 miles
c= 13,8 miles

Brn

a=3,5
b=11,5
c=13,8

Samet A.

cant find

Mümüne

a = 4.5 miles
b 11.5 miles

$$c = 13.8 \text{ miles}$$

7488 / 7488

$$C > B > A$$

dyy

$$B = 11.5$$

$$C = 13.8$$

$$A = 3.5$$

Sude Ft

$$a = 3,5$$

$$b = 11,5$$

$$c = 13,8$$

E

$$\text{Route A} = 3,5$$

$$\text{Route B} = 11,5$$

$$\text{Route C} = 13,8$$

Zerin

-

Nur B

$$9x + 5(x + 8) = 89$$

$$9x + 5x + 40 = 89$$

$$14x = 49$$

$$x = 3.5$$

$$B = x + 8 = 3.5 + 8 = 11.5$$

Ö.y

$$\text{route a} = 3.5$$

$$\text{route b} = 11.5$$

$$\text{route c} = 13.8$$

H

$$9x + 5(x + 8) = 89$$

$$9x + 5 + 40 = 89$$

ai

$$1) A = x \quad B = x + 8$$

$$2) \text{Route A 9 times} + \text{Route B 5 times} = 89$$

$$3) 9x + 5(x + 8) = 89$$

$$4) 9x + 5x + 40 = 89$$

$$5) \text{take to } +40 \text{ the other side}$$

$$6) 13x = 49$$

$$7) \text{divided both side by 13}$$

$$8) x = 49/13$$

Eren K

$$\text{route A} = 3.5 \text{ miles}$$

$$\text{route B} = 11.5 \text{ miles}$$

$$\text{route C} = 13.8 \text{ miles}$$

ayk

$$\begin{array}{ccc} A & B & C \\ A=x. & B=x+9. & =20.x+9/20 \end{array}$$

NB

$$\begin{array}{l} A = 3,5 \\ B = 11,5 \\ C = 13,8 \end{array}$$

Caner

route a 3.5 mil
route b 11.5 mil
route c 13,8 mil

engin

$$\begin{array}{l} A = 3.5 \text{ miles} \\ B = 11.5 \text{ miles} \\ C = 13.8 \text{ miles} \end{array}$$

g

idk

YGZ

$$A = 3.5, B = 11.5, C = 13.8$$