What is the greatest common divisor of $2 \cdot 7^5$ and $2^4 \cdot 3 \cdot 7^3$

- a. $2^4 \cdot 7^5$
- b. $2^4 \cdot 3 \cdot 7^5$
- c. $2 \cdot 3 \cdot 7^3$
- d. $2 \cdot 7^3$
- e. None of the choices is correct

If ab=100 and GCD(a,b) = 5 then LCM(a,b) =

- a. 100
- b. 20
- c. 50
- d. 1000
- e. None of the choices is correct

Which of the following integers are pairwise relatively prime

- a. 8, 13, 16
- b. 4, 7, 18
- c. 5, 7, 15
- d. 7, 9, 16
- e. 7, 14, 19

-18 mod 4 =

- a. -2
- b. 1
- c. 2
- d. 3
- e. None of the choices is correct

What is the greatest common divisor of $2^3 \cdot 3 \cdot 7^2$ and $2 \cdot 5^2 \cdot 7^3$

- a. $2^2 \cdot 7$
- b. $2 \cdot 3 \cdot 5^2 \cdot 7^2$
- c. $2^3 \cdot 3 \cdot 5^2 \cdot 7^3$
- d. $2^3 \cdot 7^3$
- e. None of the choices is correct

Clear my choice

Which of the following integers are pairwise relatively prime

- a. 9, 13, 14
- b. 6, 7, 9
- c. 5, 8, 10
- d. 7, 9, 15
- e. 7, 14, 19

Clear my choice

Which value of x makes the following formula correct

$20 \equiv x(\bmod 9)$

- a. 2
- b. 3
- c. 4
- d. 5
- e. 6

Prove by induction that

$$2+5+8+\cdots+(3n-1)=\frac{3n^2+n}{2}$$

Where $n \geq 1$

Note: You can either answer this question in the space below or upload one file that contains your answer. You should upload your file at least five minutes before the end of the exam.

ملاحظة: من الممكن حل السؤال بالفراغ التالي أو على ورقة خارجية و من ثم تحميلها. ملاحظة استطيع تحميل ملف واحد فقط. يجب تحميل الملف قبل انتهاء الامتحان بخمس دقائق على الأقل

-16 mod 3 =

- a. -1
- b. 1
- c. 2
- d. -2
- e. None of the choices is correct

Clear my choice

-17 mod 4 =

- a. -1
- b. 1
- c. 2
- d. 3
- e. None of the choices is correct

Clear my choice

Which of the following integers are pairwise relatively prime

- a. 7, 13, 15
- b. 6, 7, 15
- c. 5, 7, 14
- d. 8, 9, 18
- e. 7, 14, 19

Clear my choice

Which of the following integers are pairwise relatively prime

- a. 6, 13, 15
- b. 6, 7, 10
- c. 5, 8, 14
- d. 8, 9, 17
- e. 7, 14, 19

Clear my choice

Which value of x makes the following formula correct

$15 \equiv x(\bmod 6)$-

- a. 2
- b. 3
- c. 4
- d. 5
- e. 6

What is the greatest common divisor of $2^3 \cdot 3 \cdot 7^2$ and $2 \cdot 5^2 \cdot 7^3$

- a. $2 \cdot 7^2$
- b. $2 \cdot 3 \cdot 5^2 \cdot 7^2$
- c. $2^3 \cdot 3 \cdot 5^2 \cdot 7^3$
- d. $2^3 \cdot 7^3$
- e. None of the choices is correct

Clear my choice

If ab=200 and GCD(a,b) = 5 then LCM(a,b) =

- a. 20
- b. 1000
- c. 50
- d. 10
- e. None of the choices is correct

What is the greatest common divisor of $2^3 \cdot 3 \cdot 7^2$ and $2 \cdot 5^2 \cdot 7^1$

- a. $2 \cdot 7^2$
- b. $2 \cdot 3 \cdot 5^2 \cdot 7^2$
- c. $2^3 \cdot 3 \cdot 5^2 \cdot 7^3$
- d. $2^3 \cdot 7^3$
- e. None of the choices is correct

Clear my choice

If ab=500 and GCD(a,b) = 5 then LCM(a,b) =

- a. 100
- b. 2500
- c. 50
- d. 1000

Which of the following integers are pairwise relatively prime

- a. 6, 13, 15
- b. 6, 7, 10
- c. 5, 8, 14
- d. 8, 9, 17
- e. 7, 14, 19

Clear my choice

-16 mod 3 =

- a. -1
- b. 1
- c. 2
- d. -2
- e. None of the choices is correct

Prove by induction that

$$3+5+7+\cdots+(2n+1)=n^2+2n$$

Where $n \geq 1$

Note: You can either answer this question in the space below or upload one file that contains your answer. You should upload your file at least five minutes before the end of the exam.

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What is the greatest common divisor of $2^3 \cdot 3 \cdot 7^2$ and $2 \cdot 5^2 \cdot 7^3$

- a. $2^2 \cdot 7$
- b. $2 \cdot 3 \cdot 5^2 \cdot 7^2$
- c. $2^3 \cdot 3 \cdot 5^2 \cdot 7^3$
- d. $2^3 \cdot 7^3$
- e. None of the choices is correct

Clear my choice

If ab=500 and GCD(a,b) = 5 then LCM(a,b) =

- a. 100
- b. 2500
- c. 50
- d. 1000
- e. None of the choices is correct

-17 mod 4 =

- a. -1
- b. 1
- c. 2
- d. 3
- e. None of the choices is correct

Clear my choice

Which of the following integers are pairwise relatively prime

- a. 7, 13, 15
- b. 6, 7, 15
- c. 5, 7, 14
- d. 8, 9, 18
- e. 7, 14, 19

Clear my choice

If ab=200 and GCD(a,b) = 5 then LCM(a,b) =

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- b. 1000
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- e. None of the choices is correct

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Which value of x makes the following formula correct

$20 \equiv x(\bmod 9)$

- a. 2
- b. 3
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- d. 5
- e. 6

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What is the greatest common divisor of $2^3 \cdot 3 \cdot 7^3$ and $2 \cdot 5^3 \cdot 7^3$

- a. $2 \cdot 7^2$
- b. $2 \cdot 3 \cdot 5^2 \cdot 7^2$
- c. $2^3 \cdot 3 \cdot 5^3 \cdot 7^3$
- d. $2^3 \cdot 7^3$
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- a. 6, 13, 15
- b. 6, 7, 10
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- d. 8, 9, 17
- e. 7, 14, 19

Clear my choice

-16 mod 3 =

- a. -1
- b. 1
- c. 2
- d. -2

Which value of x makes the following formula correct

$15 \equiv x(\bmod 6)$

- a. 2
- b. 3
- c. 4
- d. 5
- e. 6

Clear my choice

Which of the following relations is an equivalence relation defined on A={1,2,3}

- a. R = {(1,2),(2,1),(2,2),(3,3)}
- b. None of the choices is correct
- c. R = {(1,1),(2,1),(2,2),(3,2),(3,3)}
- d. R = {(1,1),(1,3),(2,2),(2,3),(3,2),(3,3)}
- e. R = {(1,1),(1,2),(2,1),(2,2),(3,3)}

Let the relation R be defined on the set A = {a,b,c}, where

R = {(a,a), (a,b), (b,c),(c,b)}

Which of the following relations is an equivalence relation defined on A={1,2,3}

- a. R = {(1,1),(2,1),(2,2),(3,1),(3,3)}
- b. R = {(1,1),(1,2),(2,1),(2,2),(2,3),(3,2)}
- c. R = {(1,1),(2,2),(2,3),(3,2),(3,3)}
- d. None of the choices is correct
- e. R = {(1,1),(1,2),(2,2),(2,3),(3,3)}

Let the relation R be defined on the set A = {a,b,c}, where

R = {(a,a), (a,b), (a,c),(b,b), (c,c)}.

The relation R is

Let the relation R be defined on the set A = {a,b,c}, where R = {(a,a), (b,b), (c,c)}.

The relation R is

Reflexive

Not reflexive

Symmetric

Not Symmetric

Antisymmetric

Not Antisymmetric

Transitive

Not Transitive

What is the greatest common divisor of $2^3 \cdot 3 \cdot 7^2$ and $2 \cdot 5^2 \cdot 7^3$

- a. $2 \cdot 7^2$
- b. $2 \cdot 3 \cdot 5^2 \cdot 7^2$
- c. $2^3 \cdot 3 \cdot 5^2 \cdot 7^3$
- d. $2^3 \cdot 7^3$
- e. None of the choices is correct

Clear my choice

Which of the following relations is an equivalence relation defined on A={1,2,3}

- a. R = {(1.1),(2,1),(2,2),(3,2),(3,3)}
- b. R = {(1.2),(2,1),(2,2),(3,3)}
- c. R = {(1.1),(1,3),(2,2),(2,3),(3,2),(3,3)}
- d. None of the choices is correct
- e. R = {(1.1),(1,2),(2,1),(2,2),(3,3)}

Let the relation R be defined on the set A = {a,b,c}, where

R = {(a,a), (a,b), (b,c),(c,b)}.

The relation R is

Reflexive | Not reflexive

Symmetric | Not Symmetric

Antisymmetric | Not Antisymmetric

Transitive | Not Transitive

Let the following matrix represents a relation R which is defined on the set A = {a,b,c}

$$\begin{bmatrix} 1 & 1 & 0 \\ 0 & 1 & 1 \\ 0 & 0 & 1 \end{bmatrix}$$

The relation R is

Reflexive | Not reflexive

Symmetric | Not Symmetric

Antisymmetric | Not Antisymmetric

Transitive | Not Transitive

Let R and S be relations defined on the set A = {a,b,c} such that

R = {(a,a),(a,c),(b,b),(b,c),(c,a)}

S = {(a,b),(b,b),(c,a),(c,b)}

$R \cup S$ =

R^{-1} =

Symmetric closure of R =

S o R =

Transitive closure of R =

{(a,a),(a,c),(b,a),(b,b),(b,c),(c,a),(c,c)}	{(a,b),(b,a),(c,b),(c,c)}
{(a,a),(a,c),(b,b),(b,c),(c,a)}	{(a,a),(a,b),(b,a),(b,b),(c,b)}
{}	{(a,a),(a,c),(b,b),(b,c),(c,a),(c,b)}
{(a,a),(a,c),(b,a),(b,c),(c,c)}	{(a,a),(a,c),(b,b),(c,a),(c,b)}
{(a,a),(a,b),(a,c),(b,b),(b,c),(c,a),(c,b)}	{(a,c),(b,a),(b,b),(b,c)}
{(b,b),(c,a)}	{(a,b),(a,c),(b,b),(b,c),(c,a),(c,b),(c,c)}
{(a,b),(a,c),(b,a),(b,b),(b,c),(c,a),(c,b)}	{(a,b),(b,b),(c,a),(c,b)}

Which of the following relations is an equivalence relation defined on A={1,2,3}

- a. R = {(1,1),(1,3),(2,2),(2,3),(3,3)}
- b. R = {(1,1),(1,2),(2,2),(3,2),(3,3)}
- c. None of the choices is correct
- d. R = {(1,1),(2,2),(2,3),(3,2)}
- e. R = {(1,1),(1,3),(2,2),(3,1),(3,3)}

Let R and S be relations defined on the set A = {1,2,3} such that

R = {(1,2),(2,2),(3,1),(3,2)}

S = {(1,1),(1,3),(2,2),(2,3),(3,1)}

$R \cup S$ =

R^{-1} =

Symmetric closure of R =

S o R =

Transitive closure of R =

{(1,1),(1,3),(2,2),(2,3),(3,1),(3,2)}	{(1,3),(2,1),(2,2),(2,3)}
{(1,1),(1,3),(2,2),(3,1),(3,2)}	{(1,2),(2,2),(3,1),(3,2)}
{(1,1),(1,3),(2,1),(2,2),(2,3),(3,1),(3,3)}	[illegible]
{(1,2),(1,3),(2,2),(2,3),(3,1),(3,2),(3,3)}	{(1,1),(1,2),(1,3),(2,2),(2,3),(3,1),(3,2)}
{(1,1),(1,2),(2,1),(2,2),(3,2)}	{(1,2),(1,3),(2,1),(2,2),(2,3),(3,1),(3,2)}

$R = \{(a,a), (a,b), (b,a), (b,b), (c,c), (c,a)\}$.

The relation R is

Reflexive | Not reflexive

Symmetric

Not Symmetric

Antisymmetric

Not Antisymmetric

Transitive

Not Transitive

Let the relation R be defined on the set A = {a,b,c}, where

R = {(a,a), (a,b), (b,a), (b,b), (c,c), (c,a)}.

The relation R is

Reflexive

Not reflexive

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Let R and S be relations defined on the set A = {a,b,c} such that

R = {(a,a),(a,c),(b,b),(b,c),(c,a)}

S = {(a,b),(b,b),(c,a),(c,b)}

$R \cup S$ = {(a,a),(a,c),(b,a),(b,b),(b,c),(c,a),(c,c)}

R^{-1} = {(a,a),(a,c),(b,b),(b,c),(c,a)}

Symmetric closure of R =

S ∘ R =

Transitive closure of R =

{(a,b),(b,a),(c,b),(c,c)}

{(a,a),(a,b),(b,a),(b,b),(c,b)}

{ }

{(a,a),(a,c),(b,b),(b,c),(c,a),(c,b)}

{(a,a),(a,c),(b,a),(b,c),(c,c)}

{(a,a),(a,c),(b,b),(c,a),(c,b)}

{(a,a),(a,b),(a,c),(b,b),(b,c),(c,a),(c,b)}

{(a,c),(b,a),(b,b),(b,c)}

{(a,b),(c,a)}

{(a,b),(b,b),(c,a),(c,b)}

{(a,b),(b,a),(b,b),(b,c),(c,a),(c,b)}

Which value of x makes the following formula correct

$19 \equiv x \pmod 7$

- a. 2
- b. 3
- c. 4
- d. 5
- e. 6