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

- O a. 24 · 75
- O b. 24 · 3 · 75
- 0 c. 2 · 3 · 73
- 0 d. 2 · 73

POWEROUNIT

e. None of the choices is correct

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

o a. 100

O b. 20

O c. 50

O d. 1000

POWEROUNIT

e. None of the choices is correct

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Which of the following integers are pairwise relatively prime

- O a. 8, 13, 16
- O b. 4, 7, 18
- C. 5, 7, 15
- o d. 7, 9, 16

O e. 7, 14, 19

- -18 mod 4 =
- O a.-2
- 0 b.1
- O d. 3

POWEROUNIT

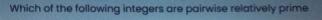
e. None of the choices is correct

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

- $0 \text{ a. } 2^2 \cdot 7$
- O b. $2 \cdot 3 \cdot 5^2 \cdot 7^2$
- $0 \text{ c. } 2^3 \cdot 3 \cdot 5^2 \cdot 7^3$
- $\bigcirc \text{ d. } 2^3 \cdot 7^3$

e. None of the choices is correct

Clear my choice



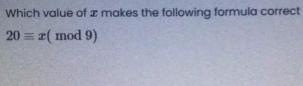
- o. 9, 13, 14
- o b. 6, 7, 9
- oc. 5, 8, 10
- O d. 7, 9, 15



Clear my choice



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

Prove by induction that

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

Where n > 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.

مالامثلة، من الممكن على السؤال بالفراغ الدائي أو على ورقة خارجية و من ثم تحديلها، مالامثلة النطاح تحديل ملف واحد فعط، يجب تحديل الملف قبل النهاء الامتحان بحمس دقائق على الأقل



 $-16 \mod 3 =$ O a. -1 O b. 1 ⊙ c. 2 O d. -2 e. None of the Shipper Tours

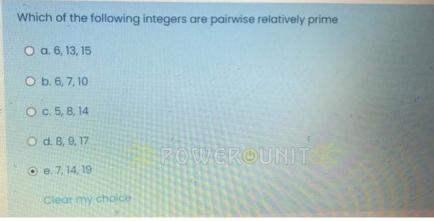
Clear my choice

 $-17 \mod 4 =$ O a. -1 0 b.1 O c. 2 o d. 3 e. None of the choice Store OUNIT Clear my choice

Which of the following integers are pairwise relatively prime

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

Clear my choice



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Which value of $oldsymbol{x}$ makes the following formula correct

$$15 \equiv x \pmod{6}$$

- O a. 2
- O b. 3
- O c. 4
- O d. 5

O e. 6

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

- o a. 2 · 7²
- $\bigcirc \ \text{b.} \ 2 \cdot 3 \cdot 5^2 \cdot 7^2$
- \circ c. $2^3 \cdot 3 \cdot 5^2 \cdot 7^3$
- $\bigcirc \text{ d. } 2^3 \cdot 7^3$

POWEROUNIT

e. None of the choices is correct

Clear my choice

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

- O a. 20
- O b. 1000
- O c. 50
- O d. 10

POWEROUNIT

e. None of the choices is correct

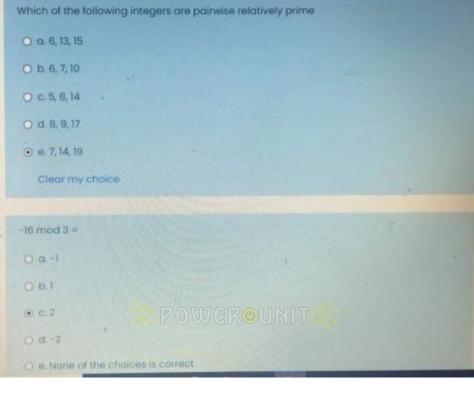


- O a. 2 . 72
- Ob. 2-3-52-72
- O c 23 · 3 · 52 · 73
- Od 23.73
- e. None of the choices is correct

Clear my choice

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

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



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.

ملاحظة، من السكل حل السؤال بالغراع النائي أو على ورقة خارجية و من ثم تحميلها؛ ملاحظة تستطيع تحميل ملف واحد فقط بجب تحميل الملف قبل التهاء الاستعان بخسس دقائق طي الألا

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

- O a. 22.7
- O b. 2 · 3 · 5² · 7²
- \circ c. $2^3 \cdot 3 \cdot 5^2 \cdot 7^3$
- $0 d. 2^3 \cdot 7^3$

e. None of the choices is correct

e. None of the choices is correct

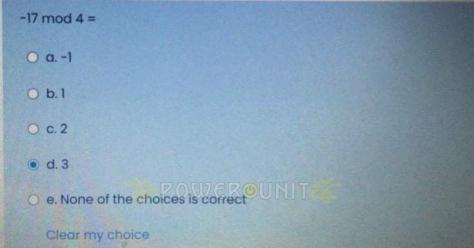
Clear my choice

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

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

POWEROUNIT

O e. None of the choices is correct



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Which of the following integers are pairwise relatively prime

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

Clear my choice

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

- o a. 20
- O b. 1000
- O c. 50
- O d. 10

POWEROUNII

e. None of the choices is correct

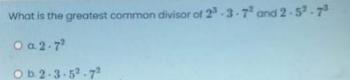
Clear my choice

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Which value of x makes the following formula correct $20 \equiv x \pmod 9$

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

Clear my choice

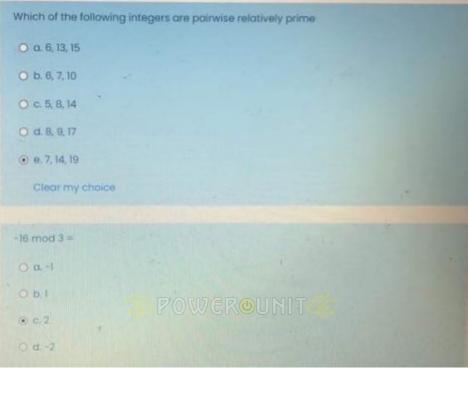


- \bigcirc c. $2^3 \cdot 3 \cdot 5^2 : 7^3$
- Od. 23 73
- e. None of the choices is correct

Clear my choice

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

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



Which value of $oldsymbol{x}$ makes the following formula correct $15 \equiv x \pmod{6}$ O a. 2 ⊙ b. 3 O c. 4 O d. 5 O e. 6

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

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

POWEROUNI

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} \bigcirc a. R = {(1.1),(2.1),(2,2),(3,1),(3,3)} O b, R = {(1.1),(1,2),(2,1),(2,2),(2,3),(3,2)} \bigcirc c, R = {(1.1),(2,2),(2,3),(3,2),(3,3)} od. None of the choices is correct. O 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 Not reflexive Reflexive Symmetric Not Symmetric Antisymmetric Not Antisymmetric Transitive

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

- O a. 2 72
- O b. $2 \cdot 3 \cdot 5^2 \cdot 7^2$
- $0 \text{ c. } 2^3 \cdot 3 \cdot 5^2 \cdot 7^3$
- Od. 23.73
- e. None of the choices correct

Clear my choice

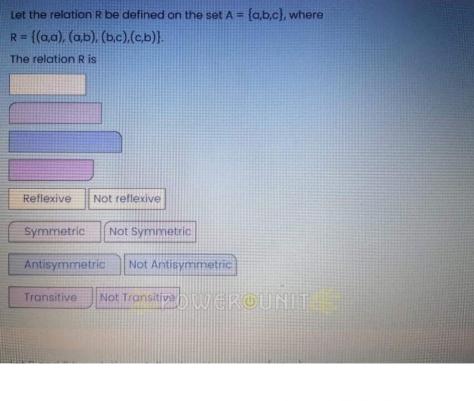
Which of the following relations is an equivalence relation defined on A={1,2,3}

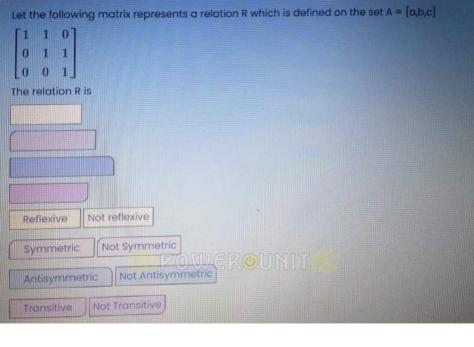
o a.
$$R = \{(1.1), (2,1), (2,2), (3,2), (3,3)\}$$

$$\bigcirc$$
 b. R = {(1.2),(2,1),(2,2),(3,3)}

$$\circ$$
 c. R = {(1.1),(1,3),(2,2),(2,3), (3,2),(3,3)}

- d. None of the choices is correct
- \bigcirc e. R = {(1.1),(1,2),(2,1),(2,2), (3,3)}





```
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 =
SOR =
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)}
```

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

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

```
S = \{(1,1),(1,3),(2,2),(2,3),(3,1)\}
R \cup S =
R^{-1} =
Symmetric closure of R =
SOR =
Transitive closure of R =
                                                                                                                                                                                                                                                                                                                                                   {(1,3),(2,1),(2,2),(2,3)}
                          [(1,1),(1,3),(2,2),(2,3),(3,1),(3,2)]
                                                                                                                                                                                                                                                                                                                                                 {(1,2),(2,2),(3,1),(3,2)}
                                             {(1,1),(1,3),(2,2),(3,1),(3,2)}
       ((1),(13),(21),(22),(23),(3,1),(23(0),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),(\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\bar{1}\),\(\ba
   [(1,2),(1,3),(2,2),(2,3),(31),(3,2),(3,3)] [(1,1),(1,2),(1,3),(2,2),(2,3),(3,1),(3,2)]
```

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

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



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

The relation R is





Reflexive

Not reflexive

Symmetric

Not Symmetric

Antisymmetric

Not Antisymmetric

Transitive

Not Transitive GROUNITE

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 Not reflexive Reflexive Symmetric Not Symmetric Antisymmetric Not Antisymmetric ROUNIT **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 = \{(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 =
SORE
Transitive closure of R =
                                                       ((a,b),(b,a),(c,b),(c,c))
```

Which value of x makes the following formula correct

 $19 \equiv x \pmod{7}$

O a. 2

0 b.3

0 c.4

0 d.5

0 e.6