**ĐỀ CƯƠNG ÔN TẬP TOÁN SỐ 2**

**Bài 1:** Thực hiện phép tính:

a) ( -125) . 25 . ( -32) . ( -4) b) ( -2) 5 . ( -25) . 5 . ( - 4) c) [164 – ( 12 . 5 + 4)] : 4 + 46

d) 7 + 15 : [55 – 2( 3 . 12 -11)] e) 25 . 29 + 52 . 22 . 15 + 11 .25 f) 20190 + 12019 . ( 32 . 3 – 24 : 8)

g) 22 . 31 – ( 12020 + 20200) : | -2| h) { 47 – [ 736 : ( 5 – 3)4]} . 2020

**Bài 2:** Tìm x biết:

a) 5 – ( 10 – x) = 7 b) 2( 4x + 1) – 1 = 17 c) 30 – 3( x – 2) =18

d) 119 + 33. x = 23 . ( -5)2  e) x – ( 13 – x) = - 24 + ( - 7 + x) f) 5( x – 6) – 2( x + 3) =12

g) 3( x – 4) – ( 8 – x) = 12 h) 7( x – 3) – 5( 3 – x) = 11x – 5 i) | x + 1| - 16 = - 3

j) 12 – 4. | x – 9| = -4 k) ( x + 3).( x – 4) = 0 l) (x – 5)2. ( 8 + x3) = 0

m) ( x 2 – 25) . ( 6 – 2x) = 0

**Bài 3:** Tìm x, y $\in Ζ$ biết:

a) ( x – 5)(y – 7) =1 b) (x + 4)(y – 2) = 2 c) (x+ 3)(2y – 6) = - 4

d) ( x + 7)(5 – y) = - 6 e) ( 12 – x)( 6 – y) = -2

**Bài 4:** Tìm GTNN hoặc GTLN của các biểu thức sau:

a) A = | x + 2| + 50 b) B = 2020 - | x + 8| c) C = 1000 + 2.| x – 6|

d) D = | 2x + 8| + 100 e) E = -200 - | 9 – 3x|

**Bài 5:** Tìm các số nguyên x biết:

a) ( x + 5) $\vdots $ x b) ( x + 7) $\vdots $ ( x – 3) c) ( x + 13) $\vdots $ ( x +4) d) ( 2x + 6) $\vdots $ ( x + 1)

e) ( 3x – 12) $\vdots $ ( x – 5) f\*) ( 3x + 5) $\vdots $ ( 2x -1)

**ĐÁP ÁN PHIẾU ÔN TẬP TOÁN SỐ 2**

**Bài 1:** **Thực hiện phép tính:**

|  |  |  |
| --- | --- | --- |
| a) ( -125) . 25 . ( -32) . ( -4)= ( - 125) . ( -32) . [ 25 . ( -4)]= 4000 . ( - 100)= - 400 000 | b) ( -2) 5 . ( -25) . 5 . ( - 4)= ( - 32) . ( - 25) . [ 5 . ( - 4) ]= 800 . (- 20)= - 16000 | c) [164 – ( 12 . 5 + 4)] : 4 + 46= [ 164 – ( 60 + 4) ] : 4 + 46= ( 164 – 64) : 4 + 46= 100 : 4 + 46= 25 + 46= 71 |
| d) 7 + 15 : [55 – 2( 3 . 12 -11)]= 7 + 15 : [ 55 – 2( 36 – 11)]= 7 + 15 : ( 55 – 2 . 25)= 7 + 15 : ( 55 – 50)= 7 + 15 : 5= 7 + 3= 10 | e) 25 . 29 + 52 . 22 . 15 + 11 .25= 25 . 29 + 25 . 4 . 15 + 11 . 25= 25 . 29 + 25 . 60 + 11 . 25= 25 . ( 29 + 60 + 11)= 25 . 100=2500 | f) 20190 + 12019 . ( 32 . 3 – 24 : 8)= 1 + 1 .( 27 – 16 : 8)= 1 + ( 27 – 2)= 26 |
| g) 22 . 31 – ( 12020 + 20200) : | -2|= 4 . 3 – ( 1 + 1) : 2= 12 – 2 : 2= 12 – 1= 11 | h) { 47 – [ 736 : ( 5 – 3)4]} . 2020= [ 47 – ( 736 : 24)] . 2020= [ 47 – ( 736 : 16)] . 2020= ( 47 – 46) . 2020= 1 . 2020= 2020 |  |

**Bài 2:** **Tìm x biết:**

|  |  |  |
| --- | --- | --- |
| a) 5 – ( 10 – x) = 7  ( 10 – x) = 5 – 7 10 – x = - 2 x = 10 – ( -2) x = 12 | b) 2( 4x + 1) – 1 = 17 2( 4x + 1) = 17 + 1 2( 4x + 1) = 18 4x + 1 = 18 : 2 4x + 1 = 9 4x = 9 – 1 4x = 8 x = 8 : 2 x = 4 | c) 30 – 3( x – 2) =18 3( x – 2) = 30 – 18  3( x – 2) = 12 x – 2 = 12 : 3 x – 2 = 4 x = 4 + 2 x = 6 |
| d) 119 + 33. x = 23 . ( -5)2 119 + 27x = 8 . 25 119 + 27x = 200 27x = 200 – 119 27x = 81 x = 81 : 27 x = 3  | e) x – ( 13 – x) = - 24 + ( - 7 + x)x – 13 + x = - 24 – 7 + x2x – 13 = - 31 + x2x – x = - 31 + 13x = - 18 | f) 5( x – 6) – 2( x + 3) =125x – 30 – 2x – 6 = 123x – 36 = 123x = 12 + 363x = 48 x = 48 : 3 x = 16 |
| g) 3( x – 4) – ( 8 – x) = 12 3x – 12 - 8 + x = 12 4x - 20 = 12 4x = 12 + 20 4x = 32 x = 32 : 4 x = 8 | h) 7( x – 3) – 5( 3 – x) = 11x – 5 7x – 21 - 15 + 5x = 11x - 5 12x – 36 = 11x – 5 12x – 11x = -5 + 36 x = 31 | i) | x + 1| - 16 = - 3 | x – 1| = - 3 + 16| x – 1| = 13

|  |  |
| --- | --- |
| TH1: x – 1 = 13x = 13 + 1x = 14 | TH2:x – 1 = -13x = -13 + 1x = - 12 |

 Vậy x $\in $ { 14 ; - 12} |
| j) 12 – 4. | x – 9| = - 4  4 . | x – 9| = 12 – ( - 4) 4 . | x – 9| = 16 | x – 9| = 16 : 4 | x – 9| = 4

|  |  |
| --- | --- |
| TH1: x – 9 = 4x = 4 + 9x = 13 | TH2: x – 9 = -4x = - 4 + 9x = 5 |

Vậy x $\in $ { 13 ; 5} | k) ( x + 3).( x – 4) = 0

|  |  |
| --- | --- |
| TH1: x + 3 = 0x = - 3 | TH2:x – 4 = 0x = 4 |

Vậy x $\in $ { - 3 ; 4}  | l) (x – 5)2. ( 8 + x3) = 0

|  |  |
| --- | --- |
| TH1:(x – 5)2= 0x – 5 = 0x = 5 | TH2: 8 + x3= 0x3 = - 8x3 = ( -2)3x = -2 |

Vậy x $\in $ { - 2 ; 5} |
| m) ( x 2 – 25) . ( 6 – 2x) = 0

|  |  |
| --- | --- |
| TH1:x 2 – 25= 0x2 = 25x = $\pm $5 | TH2: 6 – 2x = 0 2x = 6 x = 6 : 2 x = 3 |

 |  |  |

Vậy x $\in $ { $\pm $5 ; 3}

**Bài 3:** **Tìm x, y** $\in Ζ$ **biết:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| a) ( x – 5)(y – 7) =1 $⇒$(x – 5) và( y – 7 ) $\in $ Ư(1)={1; -1}

|  |  |  |
| --- | --- | --- |
| x – 5 | 1 | -1 |
| y – 7 | 1 | -1 |
| x | 6 | 4 |
| y | 8 | 6 |

 Vậy $\left\{\begin{array}{c}x=6\\y=8\end{array}\right.$ ; $\left\{\begin{array}{c}x=4\\y=6\end{array}\right.$ | b) (x + 4)(y – 2) = 2 $⇒$(x +4)và( y – 2)$\in $Ư(2)={$\pm $1;$\pm $ 2}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| x +4 | 1 | -1 | 2 | -2 |
| y – 2 | 2 | -2 | 1 | -1 |
| x | -3 | -5 | -2 | -6 |
| y | 4 | 0 | 3 | 1 |

 Vậy $\left\{\begin{array}{c}x=-3\\y=4\end{array}\right.$ ; $\left\{\begin{array}{c}x=-5\\y=0\end{array}\right.$ ; $\left\{\begin{array}{c}x=-2\\y=3\end{array}\right.$ ; $\left\{\begin{array}{c}x=-6\\y=1\end{array}\right.$ | c) (x+ 3)(2y – 6) = - 4$⇒$(x +3)và(2y –6)$\in $Ư(4)={$\pm $1;$\pm $ 2; $\pm $4}

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| x +3 | 1 | -1 | 2 | -2 | 4 | -4 |
| 2y - 6 | -4 | 4 | -2 | 2 | -1 | 1 |
| x | -2 | -4 | -1 | -5 | 1 | -7 |
| 2y | 2 | 10 | 4 | 8 | 5 | 7 |
| y | 1 | 5 | 2 | 4 | X | X |

 Vậy $\left\{\begin{array}{c}x=-2\\y=1\end{array}\right.$ ; $\left\{\begin{array}{c}x=-4\\y=5\end{array}\right.$ ; $\left\{\begin{array}{c}x=-1\\y=2\end{array}\right.$ ; $\left\{\begin{array}{c}x=-5\\y=4\end{array}\right.$  |

**Bài 4:** **Tìm GTNN hoặc GTLN của các biểu thức sau:**

|  |  |  |
| --- | --- | --- |
| a) A = | x + 2| + 50Vì: | x + 2| $\geq $ 0 $∀$ x$⇒$ | x + 2| + 50 $\geq $ 50 $∀$ x$⇒$ A $\geq $ 50 $∀$ xVậy A nhỏ nhất bằng 50 $⇔$ Dấu bằng xảy ra$⇔$ | x + 2| = 0$⇔ $ x + 2 = 0$⇔$ x = - 2  | b) B = 2020 - | x + 8| Vì: | x + 8| $\geq $ 0 $∀$ x$⇒$ - | x + 8| $\leq $ 0 $∀$ x$⇒$ 2020 - | x + 8| $\leq $ 2020 $∀$ x$⇒$ B $\leq $ 2020 $∀$ xVậy B lớn nhất bằng 2020 $⇔$ Dấu bằng xảy ra$⇔$ | x + 8| = 0$⇔ $ x + 8 = 0$⇔$ x = - 8 | c) C = 1000 + 2.| x – 6|Vì: | x - 6| $\geq $ 0 $∀$ x$⇒$ 2.| x - 6| $\geq $ 0 $∀$ x$⇒$ 1000 + 2.| x – 6| $\geq $ 1000 $∀$ x$⇒$ C $\geq $ 1000 $∀$ xVậy C nhỏ nhất bằng 1000 $⇔$ Dấu bằng xảy ra$⇔$ | x – 6 | = 0$⇔ $ x - 6 = 0$⇔$ x = 6  |
| d) D = | 2x + 8| + 100 Vì: | 2x + 8| $\geq $ 0 $∀$ x$⇒$ | 2x + 8| + 100 $\geq $ 100 $∀$ x$⇒$ D $\geq $ 100 $∀$ xVậy D nhỏ nhất bằng 100 $⇔$ Dấu bằng xảy ra$⇔$ | 2x + 8| = 0$⇔ $ 2x + 8= 0$⇔$ 2x = - 8 $⇔$ x = - 4  | e) E = -200 - | 9 – 3x|Vì: | 9 – 3x | $\geq $ 0 $∀$ x$⇒$ - | 9 – 3x | $\leq $ 0 $∀$ x$⇒$ - 200 - | x + 8| $\leq $ - 200 $∀$ x$⇒$ E $\leq $ - 200 $∀$ xVậy E lớn nhất bằng -200 $⇔$ Dấu bằng xảy ra$⇔$ | 9 – 3x | = 0$⇔ $ 9 – 3x = 0$⇔$ 3x = 9$⇔$ x = 3 |  |

**Bài 5:** Tìm các số nguyên x biết:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| a) ( x + 5) $\vdots $ x Vì: x $\vdots $ xĐể ( x + 5) $\vdots $ x$⇒$ 5 $\vdots $ x$⇒$ x $\in $ Ư( 5) = { $\pm $1 ; $\pm $ 5}Vậy x $\in $ { $\pm $1 ; $\pm $ 5} | b) ( x + 7) $\vdots $ ( x – 3)Vì: ( x – 3) $\vdots $ ( x – 3)Để ( x + 7) $\vdots $ ( x – 3)$⇒$ ( x + 7) - ( x – 3) $\vdots $ ( x – 3)$⇒$ 10 $\vdots $ ( x – 3)$⇒$x-3$\in $Ư(10)= {$\pm $1;$\pm $2;$\pm $5 ;$\pm $10}

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  x - 3 | 1 | -1 | 2 | -2 | 5 | -5 | 10 | -10 |
| x | 4 | 2 | 5 | 1 | 8 | -2 | 13 | -7 |

Vậy x $\in $ { $4;2;5;1;8;-2;13;-7$} | d) ( 2x + 6) $\vdots $ ( x + 1)Vì: ( x + 1)$\vdots $ ( x + 1)$⇒$ 2( x + 1) $\vdots $ ( x + 1)$⇒ $ 2x + 2 $\vdots $ ( x + 1)Để ( 2x + 6) $\vdots $ ( x + 1)$⇒$ ( 2x + 6) - ( 2x +2) $\vdots $ ( x + 1)$⇒$ 4 $\vdots $ ( x + 1)$⇒$x+1$\in $Ư(4)= {$\pm $1;$\pm $2;$\pm $4}

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  x + 1 | 1 | -1 | 2 | -2 | 4 | -4 |
| x | 0 | -2 | 1 | -3 | 3 | -5 |

Vậy x $\in $ { $0;-2;1;-3;3;-5$} |