***Solution Section* 1.6 − Other Types of Equations**

***Exercise***

Solve 

***Solution***







 

 

 

∴ Solutions: 

***Exercise***

Solve: 

***Solution***





|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***





|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***





|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***





|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***





|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***







|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***





|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***







|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***





|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***





|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***





∴ Solutions: 

***Exercise***

Solve: 

***Solution***





∴ Solutions: 

***Exercise***

Solve 

***Solution***





|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***











|  |  |  |
| --- | --- | --- |
|  |  |  |

∴ Solutions: 

***Exercise***

Solve 

***Solution***

 











∴ Solutions: 

***Exercise***

Solve: 

***Solution***



















∴ Solutions: 

***Exercise***

Solve 

***Solution***

 







|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve 

***Solution***



 

 

 

∴ Solutions: 

***Exercise***

Solve 

***Solution***



 

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve 

***Solution***





 

 

 



∴ Solutions: 

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



 

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



 

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



 

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



 

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



 

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



 

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



 

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



 

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve 

***Solution***



 

  *Impossible*



∴ Solution: 

***Exercise***

Solve 

***Solution***









 

 

∴ Solutions: 

***Exercise***

Solve 

***Solution***









 

 

∴ Solutions: 

***Exercise***

Solve: 

***Solution***

 ***Reciprocal***





***Exercise***

Solve: 

***Solution***









***Exercise***

Solve: 

***Solution***









***Exercise***

Solve: 

***Solution***









***Exercise***

Solve: 

***Solution***











***Exercise***

Solve: 

***Solution***











***Exercise***

Solve: 

***Solution***









***Exercise***

Solve: 

***Solution***











***Exercise***

Solve: 

***Solution***











∴ Solution set is: 

***Exercise***

Solve: 

***Solution***











∴ Solution set is: 

***Exercise***

Solve: 

***Solution***









 

 

***Check***

 

 

 

 

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***

 







***Check***: 

 ***√***

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***



∴ ***No*** solution.

***Exercise***

Solve: 

***Solution***

 







***Check***: 

 ***√***

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***

 







***Check***: 

 ***√***

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***

 







***Check***: 

 ***√***

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***



 







***Check***: 

 ***√***

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***



∴ ***No*** solution.

***Exercise***

Solve: 

***Solution***



∴ ***No*** solution.

***Exercise***

Solve: 

***Solution***







 

***Check***:

|  |  |
| --- | --- |
|  | ***√*** |

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***







 

***Check***:

|  |  |
| --- | --- |
|  | ***√*** |

∴ Solution is: 

***Exercise***

Solve: 

***Solution***











***Check***:

|  |  |
| --- | --- |
| ***√*** | ***√*** |

∴ Solutions are: 

***Exercise***

Solve: 

***Solution***











 

***Check***:

|  |  |
| --- | --- |
| ***√*** | ***√*** |

∴ Solutions are: 

***Exercise***

Solve: 

***Solution***













***Check***:

|  |  |
| --- | --- |
| ***√*** | ***√*** |

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***













***Check***:

|  |  |
| --- | --- |
| ***√*** | ***√*** |

∴ Solutions are: 

***Exercise***

Solve 

***Solution***











 

 

***Check***  

 

 

*False True*

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***













  ⇒ *x* = 1, 6

***Check***:

*x* = 1 ⇒  ⇒ 5 = 1 (*Not a solution*)

*x* = 6 ⇒  ⇒ 6 = 6 → *x* = 6 is the only solution

***Exercise***

Solve 

***Solution***

 ***Square both side***

 







 ***Solve for*** *x*

*x* = 5, −2

***Check:***

*x* = 5 ⇒ 

*x* = -2 ⇒ 

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***













***Check***:

|  |
| --- |
| ***√*** |

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***











***Check***:

|  |
| --- |
| ***√*** |

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***







***Check***:

|  |
| --- |
| ***√*** |

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***







***Check***:

|  |
| --- |
| ***√*** |

∴ Solution set is: 

***Exercise***

Solve: 

***Solution***





















***Check***:

|  |  |
| --- | --- |
|  | ***√*** |

∴ Solution is: 

***Exercise***

Solve: 

***Solution***















***Check***:

|  |
| --- |
| ***√*** |

∴ Solution is: 

***Exercise***

Solve: 

***Solution***















***Check***:

|  |
| --- |
| ***√*** |

∴ Solution is: 

***Exercise***

Solve: 

***Solution***



















***Check***:

|  |  |
| --- | --- |
| ***√*** | ***√*** |

∴ Solution is: 

***Exercise***

Solve: 

***Solution***



















***Check***:

|  |  |
| --- | --- |
|  | ***√*** |

∴ Solution is: 

***Exercise***

Solve: 

***Solution***













***Check***:

|  |  |
| --- | --- |
| ***√*** | ***√*** |

∴ Solution is: 

***Exercise***

Solve: 

***Solution***











 *Only* result.

***Check***:

|  |
| --- |
| ***√*** |

∴ Solution is: 

***Exercise***

Solve: 

***Solution***























*x* = 2, 6

*Check*





∴ Solution is: 

***Exercise***

Solve: 

***Solution***















1 = *x* – 3

⇒ *x* = 4

***Check***: 

3 – 1 = 2 (True statement)

∴ Solution is: 

***Exercise***

Solve: 

***Solution***

 

















 

 

***Check***

 

 

 

 

∴ Solution: 

***Exercise***

Solve: 

***Solution***















1 = *x* – 3

⇒ *x* = 4

***Check***: 

3 – 1 = 2 (True statement)

∴ Solution is: 

***Exercise***

Solve: 

***Solution***

 Not True

∴ ***No*** Solution

***Exercise***

Solve: 

***Solution***

∴ Solutions: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



∴ Solution: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve ****

***Solution***

****

****

****

****

|  |  |
| --- | --- |
|  |  |

∴ Solution: 

***Exercise***

Solve 

***Solution***

  ***Distribute* 4**

 



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

∴ Solutions: 

***Exercise***

Solve 

***Solution***





⇒ No solution or ∅, since the absolute value can't be equal to a negative.

***Exercise***

Solve equation: 

***Solution***

 

 

 

 

∴ Solutions: 

***Exercise***

Solve equation: 

***Solution***

 

 

 

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***





|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



∴ ***No*** Solution

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***



∴ ***No*** Solution

***Exercise***

Solve: 

***Solution***



|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve equation: 

***Solution***

 

 

 

 

 

 

 

∴ Solutions: 

***Exercise***

Solve equation: 

***Solution***

 

 

 

 



∴ Solutions: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solution: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solution: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 

***Exercise***

Solve: 

***Solution***

|  |  |
| --- | --- |
|  |  |

∴ Solutions: 