**1**

**CHAPTER**

**Number System**

**Solve of the following equations by the factorization:**

**Q No. 1:** 

**Solution:**















**Q No. 2:** 

**Solution:**













**Q No. 3:** 

**Solution:**















**Q No. 4:** 

**Solution:**















**Q No. 5:** 

**Solution:**

















**Q No. 6:** 

**Solution:**



Multiplying by ‘’





















**Q No. 7:** 

**Solution:**



Multiplying by ‘’

























**Q No. 8:** 

**Solution:**

























**Solve of the following equations by the completing the square:**

**Q No. 9:** 

**Solution:**







Adding on both side





Taking square root on both side











**Q No. 10:** 

**Solution:**







Adding on both side





Taking square root on both side











**Q No. 11:** 

**Solution:**







Adding on both side





Taking square root on both side











**Q No. 12:** 

**Solution:**





Adding on both side







Taking square root on both side











**Q No. 13:** 

**Solution:**





Adding on both side







Taking square root on both side











**Q No. 14:** 

**Solution:**









Adding on both side





Taking square root on both side











**Find roots of the following equations by using quadratic formula:**

**Q No. 15:** 

**Solution:**





Using quadratic formula



















**Q No. 16:** 

**Solution:**





Using quadratic formula











**Q No. 17:** 

**Solution:**





Using quadratic formula



















**Q No. 18:** 

**Solution:**





Using quadratic formula















**Q No. 19:** 

**Solution:**







Using quadratic formula















**Q No. 20:** 

**Solution:**





Using quadratic formula





















Exercise 4.2

**Solve of the following equations:**

**Q No. 1:** 

**Solution:**





Putting values in (1)













Put









**Q No. 2:** 

**Solution:**





Putting values in (1)















Put









**Q No. 3:** 

**Solution:**





Putting values in (1)













Put







**Q No. 3:** 

**Solution:**





Putting values in (1)













Put





















**Q No. 4:** 

**Solution:**





Putting values in (1)















Put

























**Q No. 5:** 

**Solution:**





Putting values in (1)















Put









**Q No. 6:** 

**Solution:**







Let 















Put 













**Q No. 7:** 

**Solution:**







Let 



















Put 

















**Q No. 8:** 

**Solution:**







Let 



















Put 

















**Q No. 9:** 

**Solution:**





Let 



















Put 

















**Q No. 10:** 

**Solution:**







Let 





















Put 

















**Q No. 11:** 

**Solution:**













Let 



















Put 

















**Q No. 12:** 

**Solution:**











Let 



















Put 















**Q No. 13:** 

**Solution:**











Let 



















Put 















**Q No. 14:** 

**Solution:**





Let













Put









**Q No. 15:** 

**Solution:**







Let













Put









**Q No. 16:** 

**Solution:**





Let













Put









**Q No. 17:** 

**Solution:**







Let













Put









**Q No. 18:** 

**Solution:**



Let













Put

















**Q No. 19:** 

**Solution:**



Let















Put



















**Q No. 20:** 

**Solution:**



Let















Put

















**Q No. 21:** 

**Solution:**







Let

















Put



















**Q No. 22:** 

**Solution:**





Let













Put



















**Q No. 23:** 

**Solution:**





Let

















Put



















**Q No. 24:** 

**Solution:**





Let















Put







Let











Put 







Exercise no 4.3

**Solve of the following equations:**

**Q No. 1:** 

**Solution:**



Let 

Taking Square





Putting value in (1)















Put 



Taking Square















**Checking:**

Let 





 True



Let 













Let 











Let 











Hence Solution Set

**Q No. 2:** 

**Solution:**



Let 

Taking Square





Putting value in (1)















Put 



Taking Square















**Checking:**

Let 









Let 











Let 









Similarly



Hence Solution Set

**Q No. 3:** 

**Solution:**



Taking square on both side











Again squaring on both side





















**Checking:**

Let 











Let 











Hence Solution Set

**Q No. 4:** 

**Solution:**



Taking square on both side







Again squaring on both side



















**Checking:**

Let 









Let 









Hence Solution Set

**Q No. 5:** 

**Solution:**



Taking square on both side













Again squaring on both side





















**Checking:**

Let 











Let 











Hence Solution Set

**Q No. 6:** 

**Solution:**











Dividing equation (3) by (2)







Adding equation (2) and (4)





Taking square













**Checking:** Do yourself

Hence Solution Set 

**Q No. 7:** 

**Solution:**

















Now solving 

Taking square on both side











Again squaring on both side





















**Checking:**

Let 









Let 









Hence Solution Set

**Q No. 8:** 

**Solution:**

















Now solving 

Squaring both side













**Checking:**

Let 









Let 









Hence Solution Set

**Q No. 9:** 

**Solution:**

















Now solving 

Squaring both side









Again squaring















**Checking:**

Do yourself

Hence Solution Set

**Q No. 10:** 

**Solution:**









Let 













Put 













**Checking:**

Do yourself

Hence Solution Set

**Q No. 11:** 

**Solution:**



Let 





Dividing equation (3) by (2)







Adding equation (2) and (4)





Put 















**Checking:**

Let 









Let 









Hence Solution Set

**Q No. 12:** 

**Solution:**









Dividing equation (3) by (2)







Adding equation (2) and (4)





Put 











**Checking:**

Do yourself

Hence Solution Set