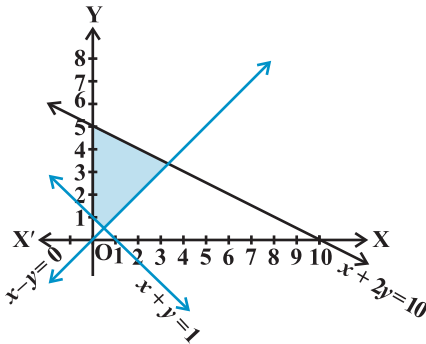


15.



Miscellaneous Exercise on Chapter 6

1. $[2, 3]$

2. $(0, 1]$

3. $[-4, 2]$

4. $(-23, 2]$

5. $\left[\frac{-80}{3}, \frac{-10}{3} \right]$

6. $\left[1, \frac{11}{3} \right]$

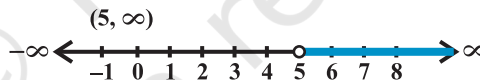
7. $(-5, 5)$



8. $(-1, 7)$



9. $(5, \infty)$



10. $[-7, 11]$



11. Between 20°C and 25°C

12. More than 320 litres but less than 1280 litres.

13. More than 562.5 litres but less than 900 litres.

14. $9.6 \leq MA \leq 16.8$

EXERCISE 7.1

1. (i) 125, (ii) 60.

2. 108

3. 5040

4. 336

5. 8

6. 20

EXERCISE 7.2

1. (i) 40320, (ii) 18 2. 30, No 3. 28 4. 64
 5. (i) 30, (ii) 15120

EXERCISE 7.3

1. 504 2. 4536 3. 60 4. 120, 48
 5. 56 6. 9 7. (i) 3, (ii) 4 8. 40320
 9. (i) 360, (ii) 720, (iii) 240 10. 33810
 11. (i) 1814400, (ii) 2419200, (iii) 25401600

EXERCISE 7.4

1. 45 2. (i) 5, (ii) 6 3. 210 4. 40
 5. 2000 6. 778320 7. 3960 8. 200
 9. 35

Miscellaneous Exercise on Chapter 7

1. 3600 2. 1440 3. (i) 504, (ii) 588, (iii) 1632
 4. 907200 5. 120 6. 50400 7. 420
 8. ${}^4C_1 \times {}^{48}C_4$ 9. 2880 10. ${}^{22}C_7 + {}^{22}C_{10}$ 11. 151200

EXERCISE 8.1

1. $1 - 10x + 40x^2 - 80x^3 + 80x^4 - 32x^5$
 2. $\frac{32}{x^5} - \frac{40}{x^3} + \frac{20}{x} - 5x + \frac{5}{8}x^3 - \frac{x^5}{32}$
 3. $64x^6 - 576x^5 + 2160x^4 - 4320x^3 + 4860x^2 - 2916x + 729$
 4. $\frac{x^5}{243} + \frac{5x^3}{81} + \frac{10}{27}x + \frac{10}{9x} + \frac{5}{3x^3} + \frac{1}{x^5}$
 5. $x^6 + 6x^4 + 15x^2 + 20 + \frac{15}{x^2} + \frac{6}{x^4} + \frac{1}{x^6}$
 6. 884736 7. 11040808032 8. 104060401
 9. 9509900499 10. $(1.1)^{10000} > 1000$ 11. $8(a^3b + ab^3)$; $40\sqrt{6}$
 12. $2(x^6 + 15x^4 + 15x^2 + 1)$, 198