

Practise, Apply, Solve 4.3, page 325

1. (a) 2 (b) 2 (c) 1 (d) 0
2. (a) 0 (b) 2 (c) 1 (d) 0
3. (a) 2 (b) 0 (c) 0 (d) 1
4. (a) 0 (b) 2 (c) 2 (d) 1
5. (a) 2 (b) 2 (c) 1 (d) does not meet
6. Machine *B* is better: maximum profit is greater than Machine *A* and Machine *B*, and it reaches this maximum profit before Machine *A* and *B* reach their respective maximum profits.
7. $k < -2$ or $k > 2$
8. $m = 1$
9. (a) $k > \frac{4}{3}$ (b) $k = \frac{4}{3}$ (c) $k < \frac{4}{3}$
10. $k = -4$ or $k = 8$
11. yes; $p = -6$ or $p = -8$
12. no
13. 1.5×10^8 items
14. 14 m/s
15. (a) (4, 3), (-3, -4) (b) $k = \pm 5\sqrt{2}$
17. (a) no k (b) no k (c) $k \in \mathbf{R}$
18. 3.65 cm, 8.23 cm