

CHAPTER 17 Directed Numbers**EXERCISE 17a (p. 253)**

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|--------------------|----------------------|------------------|--------------------|-------------------------|
| 1. $+10^\circ$ | 9. 4° below | 17. 2° | 26. $+50\text{p}$ | 34. -5m |
| 2. -7° | 10. 10° below | 18. -2° | 27. -50p | 35. -3°C |
| 3. -3° | 11. 8° above | 19. 1° | 28. -1min | 36. $+21^\circ\text{C}$ |
| 4. $+5^\circ$ | 12. freezing point | 20. 3° | 29. $+\text{£}50$ | 37. $+150\text{m}$ |
| 5. -8° | 13. 10° | 21. -7° | 30. $-\text{£}5$ | 38. -3°C |
| 6. 0° | 14. 12° | 22. -2° | 31. $+5$ paces | 39. $+25\text{p}$ |
| 7. 2° below | 15. 4° | 24. -5s | 32. -5 paces | 40. 6 paces in front |
| 8. 3° below | 16. -3° | 25. $+5\text{s}$ | 33. $+200\text{m}$ | |

EXERCISE 17b (p. 256)

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|--------|---------|----------------|---------------|---------------------------------|
| 1. $>$ | 6. $<$ | 11. $<$ | 16. 2, 4 | 21. $\frac{1}{6}, \frac{1}{36}$ |
| 2. $>$ | 7. $>$ | 12. $>$ | 17. 0, -3 | 22. $-4, -2$ |
| 3. $>$ | 8. $>$ | 13. 10, 12 | 18. 5, 8 | 23. $-8, -16$ |
| 4. $<$ | 9. $>$ | 14. $-10, -12$ | 19. $-7, -11$ | 24. $-2, -3$ |
| 5. $>$ | 10. $<$ | 15. $-2, -4$ | 20. 16, 32 | |

EXERCISE 17c (p. 257)

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|---------|----------|-----------|----------|----------|
| 1. -3 | 9. -12 | 17. 2 | 25. 4 | 33. 2 |
| 2. 3 | 10. -1 | 18. -3 | 26. 6 | 34. -2 |
| 3. -2 | 11. 5 | 19. -3 | 27. 3 | 35. -1 |
| 4. -2 | 12. -2 | 20. -1 | 28. 0 | 36. -2 |
| 5. 2 | 13. -2 | 21. 3 | 29. -3 | 37. 1 |
| 6. 7 | 14. -1 | 22. -6 | 30. -5 | 38. 2 |
| 7. 1 | 15. -6 | 23. -10 | 31. 1 | 39. 5 |
| 8. 2 | 16. 6 | 24. -5 | 32. 2 | 40. 16 |

Addition and subtraction of negative numbers: discussion using many different examples is advisable.

EXERCISE 17d (p. 259)

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|---------|----------|-----------|----------|----------|
| 1. 2 | 6. 3 | 11. -14 | 16. 7 | 21. 13 |
| 2. -3 | 7. -3 | 12. 0 | 17. -3 | 22. 13 |
| 3. 7 | 8. 6 | 13. 0 | 18. 2 | 23. -6 |
| 4. 3 | 9. -14 | 14. 6 | 19. -4 | 24. 8 |
| 5. -9 | 10. 10 | 15. -6 | 20. 5 | 25. 1 |

EXERCISE 17e (p. 260)

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|----------|-----------|----------|----------|-----------|
| 1. 1 | 12. -12 | 23. -8 | 34. 0 | 45. 2 |
| 2. -5 | 13. 5 | 24. 19 | 35. -1 | 46. -12 |
| 3. 9 | 14. -9 | 25. -4 | 36. 0 | 47. 3 |
| 4. 8 | 15. 1 | 26. -4 | 37. 9 | 48. 18 |
| 5. -12 | 16. 9 | 27. 4 | 38. -7 | 49. -2 |

6. 7	17. -1	28. -3	39. -4	50. 1
7. 4	18. 0	29. -3	40. 3	51. 2
8. 10	19. 2	30. -19	41. -10	52. -15
9. 15	20. 16	31. 2	42. -3	53. -9
10. 2	21. 5	32. 3	43. -2	54. -6
11. 5	22. -4	33. 0	44. 1	55. -8

EXERCISE 17f (p. 261)

1. -24	4. -12	7. -48	10. -5	13. -42
2. -14	5. -27	8. -5	11. -16	14. -5
3. -24	6. -12	9. -6	12. -36	15. -12.5

EXERCISE 17g (p. 262)

1. -3	5. -4	9. -5	13. -2	17. -4
2. -2	6. -2	10. -4	14. -2	18. -2
3. -5	7. -10	11. -1	15. -4	
4. -4	8. -3	12. -2	16. -9	

EXERCISE 17h (p. 263)

1. -5°	3. 2	5. -2	7. 0	9. -24
2. a) $< b) >$	4. -5	6. 4	8. 5	10. -12

EXERCISE 17i (p. 263)

1. -3°	3. -6	5. 5	7. 0	9. -12
2. a) $> b) >$	4. -2	6. 1	8. 3	10. -2