

Exercise 3.1 (page 40)

- | | | |
|------------------|------------------|------------------|
| 1 25 | 2 8 | 3 49 |
| 4 27 | 5 81 | 6 64 |
| 7 144 | 8 1000 | 9 12 |
| 10 15 | 11 4 | 12 6 |
| 13 14 | 14 5 | 15 9 |
| 16 10 | 17 361 | 18 3.24 |
| 19 213.16 | 20 -729 | 21 4330.747 |
| 22 -1.728 | 23 3.61 (3 s.f.) | 24 17.3 (3 s.f.) |
| 25 2.88 (3 s.f.) | 26 3.68 (3 s.f.) | 27 1.58 (3 s.f.) |
| 28 1.89 (3 s.f.) | 29 8.49 or -8.49 | 30 3.362 |

Exercise 3.2 (page 42)

- | | | | |
|------------|-------------|----------|-----------|
| 1 81 | 2 1 000 000 | 3 6 | 4 10 000 |
| 5 729 | 6 32 | 7 2 | 8 1024 |
| 9 10 | 10 20 | 11 1728 | 12 2 |
| 13 249 000 | 14 9224 | 15 6.275 | 16 0.8145 |
| 17 1.817 | 18 1.86 | 19 1.445 | 20 3.46 |

Exercise 3.3 (page 43)

- | | | | |
|-------|--------|-------|-----------|
| 1 8 | 2 9 | 3 125 | 4 243 |
| 5 216 | 6 512 | 7 16 | 8 100 000 |
| 9 27 | 10 625 | 11 64 | 12 8 |

Exercise 3.4 (page 45)

- | | | | |
|------------------|--------------------|-----------------------|-------------------|
| 1 $\frac{1}{9}$ | 2 $\frac{1}{1000}$ | 3 $\frac{1}{25}$ | 4 $\frac{1}{4}$ |
| 5 $\frac{1}{81}$ | 6 $\frac{1}{16}$ | 7 $\frac{1}{32}$ | 8 $\frac{1}{10}$ |
| 9 $\frac{1}{5}$ | 10 $\frac{1}{400}$ | 11 $\frac{5}{3}$ | 12 $\frac{3}{4}$ |
| 13 $\frac{2}{5}$ | 14 $\frac{25}{16}$ | 15 $\frac{27}{8}$ | 16 2 |
| 17 $\frac{8}{3}$ | 18 $\frac{9}{25}$ | 19 $\frac{343}{1000}$ | 20 $\frac{16}{9}$ |