

**Open**

**Solutions****Number and language****Exercise 1.1** page 5

Prime numbers are:  
1. 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43,  
47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97

**Exercise 1.2** page 6

1. a) 1, 2, 3, 6  
b) 1, 3, 9  
c) 1, 5, 25  
d) 1, 3, 5, 15  
e) 1, 2, 3, 4, 6, 8, 12, 24  
f) 1, 2, 3, 4, 6, 9, 12, 18, 36  
g) 1, 3, 5, 35  
h) 1, 3, 27  
i) 1, 2, 3, 6, 7, 14, 21, 42  
j) 1, 2, 4, 5, 10, 25, 50, 100

**Exercise 1.3** page 6

1. a) 3, 5 b) 2, 3 c) 2, 3 d) 2  
e) 2, 5 f) 13 g) 3, 11 h) 5, 7

**Exercise 1.4** page 7

1. a)  $2^2 \times 3$  b)  $2^3$  c)  $2^2 \times 3^3$   
d)  $2^3 \times 5$  e)  $2^7 \times 11$  f)  $2^3 \times 7$   
g)  $3^2 \times 5$  h)  $3 \times 13$  i)  $3 \times 7 \times 11$   
j)  $3^2 \times 7$

**Exercise 1.5** page 7

1. a) 4 b) 5 c) 6 d) 3 e) 9  
f) 22 g) 8 h) 13 i) 17 j) 12  
2. a) 42 b) 60 c) 70 d) 90 e) 120  
f) 105 g) 20 h) 231 i) 240 j) 200

**Exercise 1.6** page 8

1. a) Rational b) Rational c) Irrational  
d) Rational e) Rational f) Rational  
g) Irrational h) Rational i) Rational

2. a) Irrational b) Irrational c) Rational  
d) Rational e) Rational f) Rational  
3. a) Rational b) Irrational c) Rational  
d) Rational

**Exercise 1.7** page 9

1. a) 5 b) 3 c) 7 d) 10 e) 11  
f) 13 g) 0.1 h) 0.2 i) 0.3 j) 0.5

2. Students check their answers.

3. a)  $\frac{1}{3}$  b)  $\frac{1}{5}$  c)  $\frac{1}{7}$  d)  $\frac{1}{9}$  e)  $\frac{1}{11}$   
f)  $\frac{1}{13}$  g)  $\frac{1}{15}$  h)  $\frac{1}{17}$  i)  $\frac{1}{19}$  j)  $\frac{1}{21}$

**Exercise 1.8** page 9

1. The following answers are correct to 1 d.p.:  
a) 5.9 b) 6.7 c) 7.4 d) 7.7 e) 1.4

2. Students check their answers.

**Exercise 1.9** page 10

1. a) 2 b) 5 c) 3 d) 0.1 e) 0.3  
f) 6 g) 10 h) 100 i) -2 j) -3

**Exercise 1.10** page 10

1. a) 146 °C  
b) -\$35 c) -\$318 d) -\$88

2. a) \$35 b) -\$160 c) \$90

3. 165 m  
4. 695 m

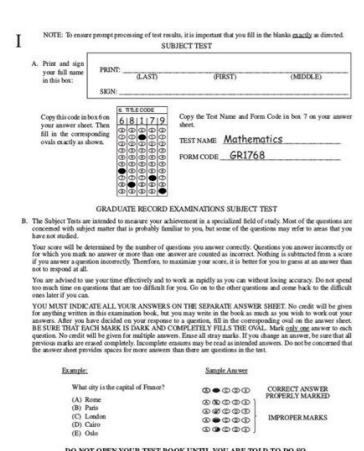
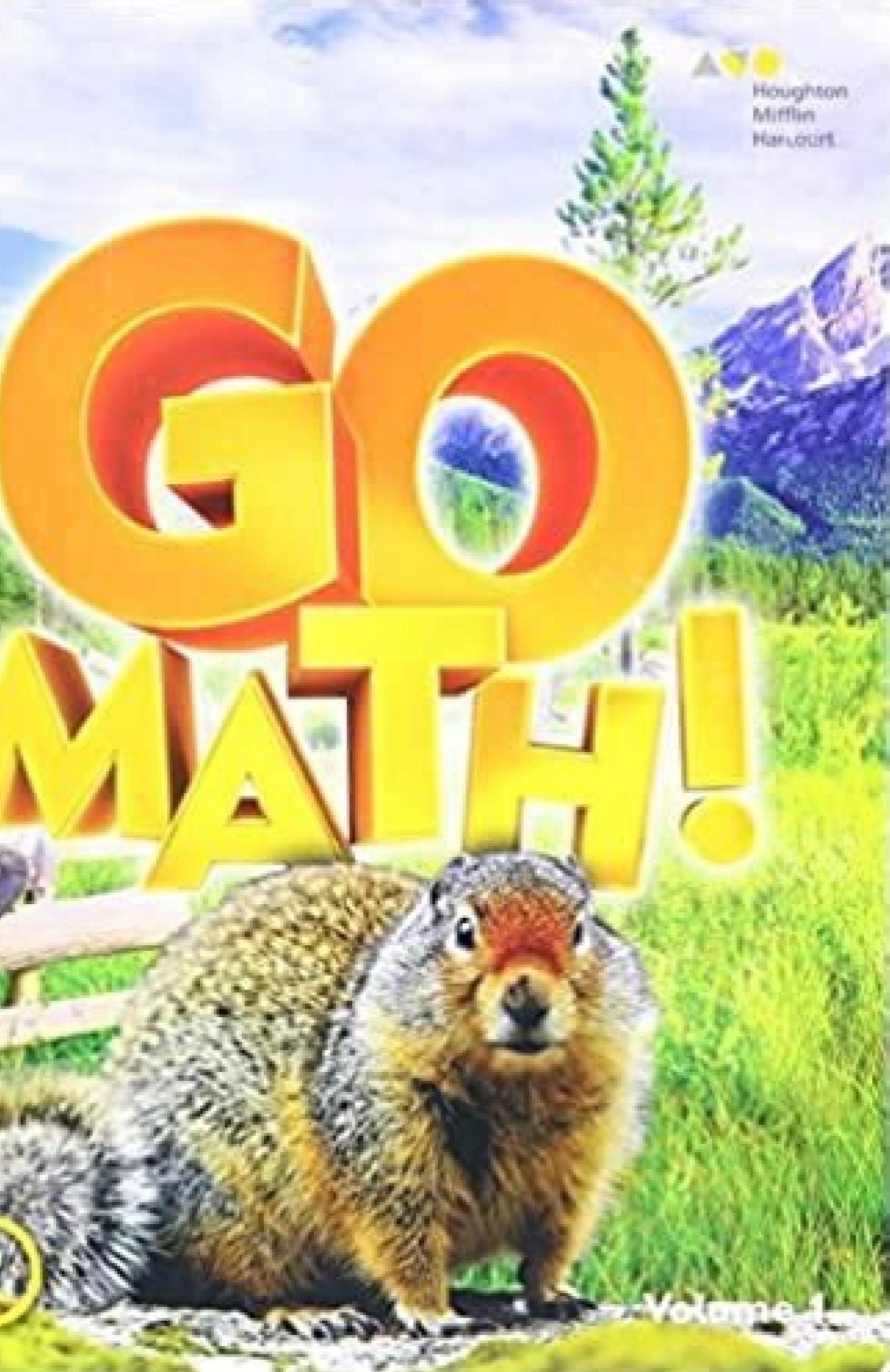
**Student assessment 1** page 11

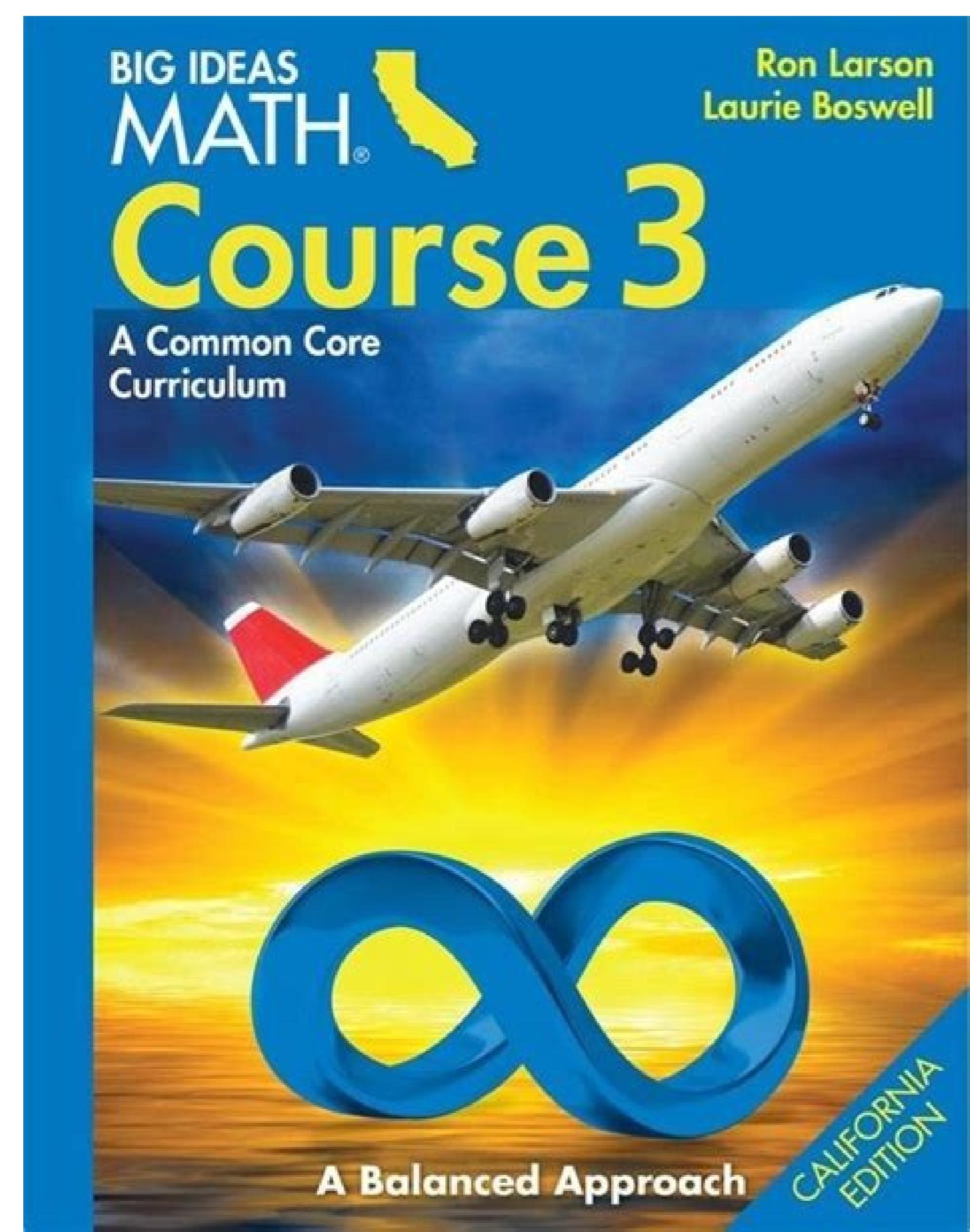
1. a) Rational b) Irrational c) Rational  
d) Rational e) Rational f) Irrational  
2. a)  $\frac{1}{3}$  b) 3 c)  $\frac{11}{3}$   
3. a) 81 b) 225 c)  $\frac{1}{81}$   
d) 0.49

**Exercise 1.10** page 11

1. a) Rational b) Irrational c) Rational  
d) Rational e) Rational f) Rational  
g) Irrational h) Rational i) Rational

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Website that has math textbook answers.