



The National
Orthodox School
Shmaisani

Grade Eight CS

Chapter 4 Place Value

Student Book

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Exercise 4A

$$1. 10^{-2} = \frac{1}{10^2}$$

$$\frac{1}{10^3} = 10^{-3}$$

$$10^{-5} = 0.00001$$

$$10^{-4} = 0.0001$$

$$10^3 = 1000$$

2. a) 7000

b) 28000

c) 43000

d) 7100

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3. a) 8.03

b) 0.42

c) 5.1

d) 958

4. a) 1000 / 1000 / 0.8

b) 2 / 100 / 100 / 35

c) 10^5 / 10^5 / 72

d) 10 / 10 / 0.2

5. a) 100 / 100 / 7.4

b) 5 / 100 000 / 100 000 / 800

c) 3 / 1000 / 1000 / 2145

d) 1 / 10 / 10 / 3

6. a) 10^2

b) 10^3

c) dividing / 10^4

d) multiplying / 10^5

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7. a) 0.9
b) 0.287
c) 8.63
d) 0.046

8. a) 48
b) 210
c) 60
d) 14.3

9. a) 3400
b) 7.13
c) 8.1
d) 70

10. Students' Answers

Example: $10^2 / 0.01$

$1000 / 10^{-3}$

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11. a) 10^5
b) 249000
c) 10^{-4}
d) 10^{-2}
e) 2.84
f) 10^4
g) 230
h) 0.007

12. a) $700\,000 + 6\,000 = 706\,000$
b) $81\,000 - 2\,540 = 78\,460$
c) $120\,000 - 11\,000 = 109\,000$
d) $17 + 30 = 47$

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Exercise 4B

1. a) 2×10^3

d) 9×10^4

g) 3×10^6

2. a) 300

d) 20 000 000

f) 4 000 000 000

3. a) 4.2×10^2

d) 2.3×10^4

h) 9.81×10^4

i) 6.31×10^6

4. No, he is not correct. The number should be between 1 and less than 10.

The correct answer is: 6.2×10^6

5. a) 7×10^3
b) 6.34×10^4
c) 8.7×10^4
d) 5×10

6. a) 1600
c) 381
e) 301 000 000

7.

- a) The number should be between 1 and less than 10.
b) The number should be between 1 and less than 10.
c) We need a single power of 10.

8.

1 year = 52 weeks

1.404×10^{10} sweets in a year.

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9. 9.46×10^{17} Km

10.

a) 5.43×10^8

b) 3×10^6

c) 7.1×10^5

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Exercise 4C

1.

a) 0.06

c) 0.008

e) 0.000 002

2.

b) 7.4×10^{-3}

d) 1.3×10^{-4}

f) 8.2×10^{-4}

h) 1.6×10^{-3}

3.

b) 4.925×10^{-7}

d) 9.01×10^{-4}

f) 8.46×10^{-8}

4.

No, he is not correct. The multiplication sign must be used instead of the division sign.

The correct answer is: 8×10^{-3}

5.

a) 2×10^{-3}

b) 7.2×10^{-2}

c) 8.6×10^{-2}

d) 2×10^{-11}

6.

$9 \times 10^{-11} \text{ g}$

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Exercise 4D

1. a) 243, 238, 235

b) 235

245

3. $4450 \leq n < 4550$

$6500 \leq n < 7500$

$41500 \leq n < 42500$

$83150 \leq n < 83250$

$685 \leq n < 695$

4. a) Students' Answers.

For example, 4750 rounded to the nearest 10 is 4750 not 4800.

b) $4795 \leq n < 4805$

5. $0.65 \leq n < 0.75$

$3.775 \leq n < 3.785$

$3350 \leq n < 3450$

$3500 \leq n < 4500$

6. Students' Answers

Example: 524.9 is not in this interval
and it is rounded to 520 correct to 2
s.f.

7.

$827.5 \leq h < 828.5$

8.

a) True

b) False

c) True

9.

$$325 \leq n < 375$$

10.

a) $22.5 \leq n < 27.5$

b) $67250 \leq n < 67750$

c) $7.25 \leq n < 7.75$

d) $270 \leq n < 290$

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Homework Book

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3.

a) 3

b) 4 480 000

c) -3

d) 0.0430

e) -5

f) 0.0089

4. a) $8\,000\,000 + 30\,000 = 8\,030\,000$

b) $53\,000 - 560 = 52\,440$

c) $1.9 + 9000 = 9001.9$

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7.

$$2.7 \times 10^{-26} \text{ kg}$$

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3.

$$74.5 \leq h < 75.5$$

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5.

$$\text{b) } 21.35 \leq n < 21.45$$