Math Essentials 10 Teacher Learning Centre
Answer Links

<Section 3.1 Answers>

Answers to Activity Questions (pages 58–61)

1. a) 10

b) millimetres

c) mm

d) $\frac{1}{10}$

e) 0.1

2. a) 3 cm

b) 30 mm

3. a) 46 mm

b) 4.6 cm

4. b) 3.7 cm, 37 mm

c) 8.6 cm, 8 cm 6 mm

d) 10.5 cm, 105 mm

e) 144 mm, 14 cm 4 mm

f) 13.2 cm, 13 cm 2 mm

5. a) 20 cm

b) 2 cm

c) 1 mm

d) 1 cm

6. b) 4.2 cm, 42 mm

c) 0.8 cm, 8 mm

d) 7.1 cm, 71 mm

e) 5.3 cm, 53 mm

f) 3.0 cm, 30 mm

7. **a)** 100 cm

   b) 1000 mm

   c) $\frac{1}{100}$

   d) 0.01 m

8. Answers will vary. Check for correctness.

9. **a)** 100 m

   b) 200 m

   c) 1000 m

   d) kilometre

   e) km

10. **b)** 5 km

    c) 20 000 m

    d) 0.5 km

    e) 12 km

    f) 10 000 m

    g) 7500 m

    h) 0.4 km

<Section 3.2 Answers>

Answers to Activity Questions (pages 62–65)

1. **a)** millimetre, centimetre, metre, kilometre

   b) mm, centimetre

   c) cm, metre

   d) m, kilometre (or mm, metre)

2. **a)** 60 mm **b)** 400 cm **c)** 7000 m **d)** 5 mm

   e) 50 cm **f)** 0.5 km **g)** 2.5 m **h)** 1.5 km

3. **a)** centimetres **b)** metres

   c) millimetres **d)** kilometres

   e) centimetres or metres

4. 76 mm

5. **a)** 1.32 m

   b) 1 m 32 cm

6. a) 3.6 cm, 36 mm
   b) 2.4 cm, 24 mm
   c) 5.0 cm, 50 mm
   d) 5.7 cm, 57 mm
   e) 1.5 cm, 15 mm
7. Example:
   b) length of thumb
   c) length from bottom of palm to tip of thumb
   d) length inside elbow to top of fist
   e) height from floor to waist
   f) height from floor to fingertips reaching upward
8. Answers will vary for the first four references. Example:
   a) 16 cm b) 22 cm c) 66 cm
   d) 155 cm e) 100 m f) 1 km

<Section 3.3 Answers>

Answers to Activity Questions (pages 68–71)

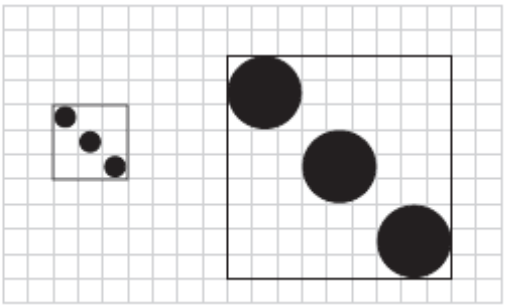
1. a) seven hundred thousand
   b) 700 000
   c) 7000 m
   d) 7000 m, 7 km
   e) 7 km
2. a) 6 cm
   b) 6 cm, 10
   c) 10
3. a) 4 cm
   b) 3
   c) 1 : 3
4. 1 : 7

5. a) 36 mm

   b) 2

   c) 2

6. 3 : 1

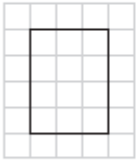
7. 

8. a) 28 cm

   b) 4

   c) 21 cm

   d) 3



9. Answers may vary depending on classroom dimensions. Look for accuracy and a correct scale diagram.

<Section 3.4 Answers>

Answers to Activity Questions (pages 72–75)

1. 7 km
2. a) 14 km b) 3.5 km
3. Check for reasonable estimates. Example:
   a) 3.5 cm, 25 km b) 4.0 cm, 28 km
   c) 2.5 cm, 18 km d) 7.7 cm, 54 km
4. Answers may vary depending on the route students choose. Example:
   a) Whitby to Bowmanville
   b) Whitby to Bowmanville would take 25 km ÷ 100 km/h = 0.25 h.

5. Answers may vary depending on the route students choose. Example:
   a) Oshawa to Port Perry
   b) The speed is lower because the route is not on a big highway and it goes through towns where the speed limit is reduced.
   c) Oshawa to Port Perry would take 0.56 h.
6. a) one million six hundred thousand
   b) 1 600 000 c) 100, 16 000
   d) 1000, 16 e) 16
7. Check for reasonable estimates. Example:
   a) 1.8 cm, 29 km b) 6.5 cm, 104 km
   c) 12.5 cm, 200 km
8. 2.5 h
9. a) Example: By measuring the scale, you determine that 1.4 cm = 2 km. Every 1.4 cm on the map that you measure is 2 km in distance.
   b) 2.5 km c) 0.25 h d) 6.5 km e) 0.65 h

<Chapter 3 Review Answers>

Answers to Chapter 3 Review (pages 76–77)

1. reduction
2. scale
3. enlargement
4. metric system
5. a) 7 mm
   b) 18 mm
   c) 49 mm
6. a) 0.7 cm
   b) 1.8 cm
   c) 4.9 cm
7. a) 36 mm, 3.6 cm
   b) 12 mm, 1.2 cm
   c) 48 mm, 4.8 cm
   d) 55 mm, 5.5 cm
   e) 23 mm, 2.3 cm
   f) 40 mm, 4.0 cm

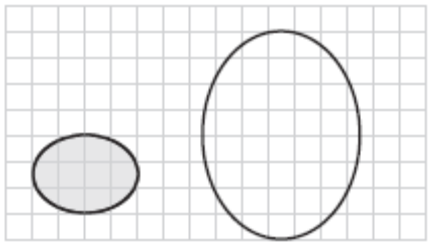
8. Example: width of baby finger; height from floor to waist

9. **a)** 4 cm

b) 15

c) 15

10.



11. **a)** 10 km

b) 21 km

c) 6 km

d) 38 km