Name _____ Date _____

Master 9.26

Extra Practice 1

Lesson 1: Measuring Linear Dimensions

1. Which unit of length would you use to measure each item?
   a) the depth of the water in a fish bowl
   b) the height of a tall building
   c) the distance from Canada to China
   d) the thickness of a piece of wood
   e) the width of a calculator

2. Draw a line of each length.
   a) 3 cm
   b) 9 cm
   c) 16 cm

Lesson 2: Measuring in Millimetres

1. Copy and complete.
   a) 10 cm = ☐ mm b) 19 cm = ☐ mm c) 85 cm = ☐ mm
   d) 80 mm = ☐ cm e) 90 mm = ☐ cm f) 10 mm = ☐ cm

2. Which is shorter? How do you know?
   a) 95 mm or 8 cm b) 20 mm or 19 cm c) 14 cm or 100 mm
   d) 6 cm or 60 mm e) 75 mm or 9 cm f) 160 mm or 16 cm

3. Estimate the length of each line in millimetres.
   Measure and record the actual lengths in millimetres and centimetres.
   a) _____
   b) ____

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Extra Practice 2

Lesson 3: Measuring in Decimetres

1. Copy and complete.
   a) 7 dm = ☐ cm b) 5 dm = ☐ cm c) 3 dm = ☐ cm
   d) 60 cm = ☐ dm e) 90 cm = ☐ dm f) 45 cm = ☐ dm

2. Which is longer? How do you know?
   a) 6 dm or 40 cm b) 29 cm or 2 dm
   c) 2 dm or 200 mm d) 700 mm or 8 dm

3. Which unit would you use to measure each item?
   a) the length of an eyelash
   b) the height of a 3-year old child
   c) the thickness of a calculator
   d) the length of a house

Lesson 5: Relating Units of Measure

1. Copy and complete.
   a) 200 mm = ☐ dm b) 3 m = ☐ cm c) 56 cm = ☐ dm
   d) 500 cm = ☐ m e) 61 mm = ☐ cm f) 24 cm = ☐ mm

2. Order these lengths from shortest to longest.
   a) 75 mm, 2 cm, 2 dm b) 3 dm, 16 cm, 140 mm
   c) 2 dm, 13 cm, 50 mm d) 5 m, 501 cm, 4999 mm

3. Draw a line of each length.
   Record each length in a new way.
   a) 0.04 m b) 1.3 dm c) 7.6 cm

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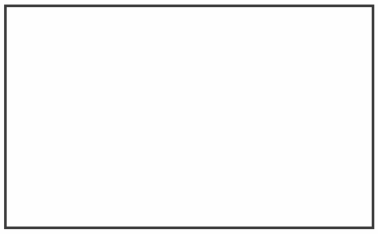
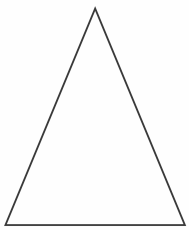
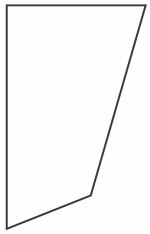
Extra Practice 3

Lesson 6: Measuring Perimeter

1. Measure to find the perimeter of each figure.

a) 

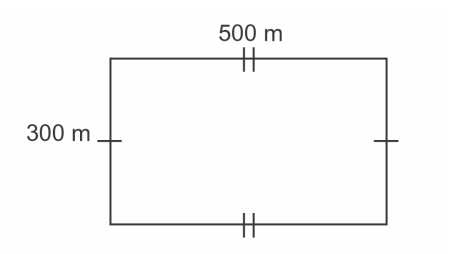
b) 

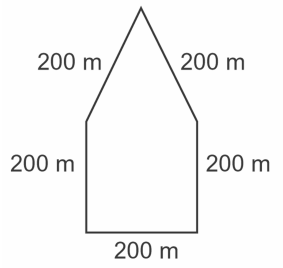
c) 

2. Order the figures in question 1 from greatest to least perimeter.

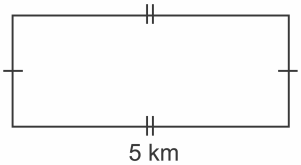
Lesson 7: Finding the Perimeter of a Large Region

1. Find the perimeter of each figure.

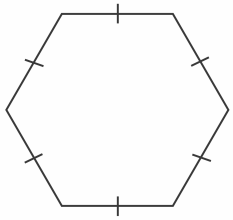
a) 

b) 

2. Write the length of the unmarked side of each regular figure. How do you know you are correct?

a) 

Perimeter = 14 km

b) 

Perimeter = 60 m

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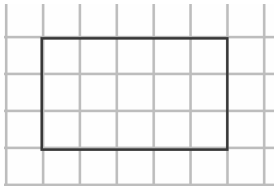
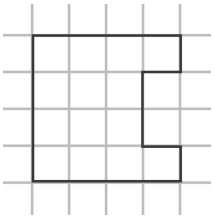
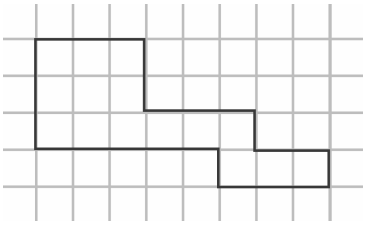
Extra Practice 4

Lesson 8: Exploring Area

1. Find the area of each figure in square units.

a) 

b) 

c) 

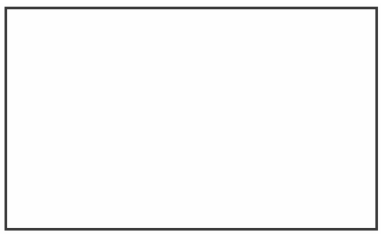
2. Use 1-cm grid paper.

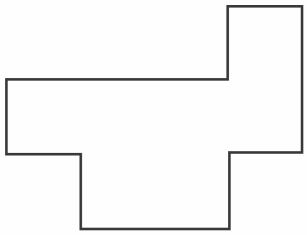
   Draw a rectangle with each area.

   a) 6 square units b) 3 square units c) 10 square units

Lesson 9: Measuring in Square Centimetres

1. Use a transparent 1-cm grid.
   Find the area of each figure in square centimetres.

a) 

b) 

2. Use 1-cm grid paper.
   Draw 3 different rectangles with an area of 12 cm^2.

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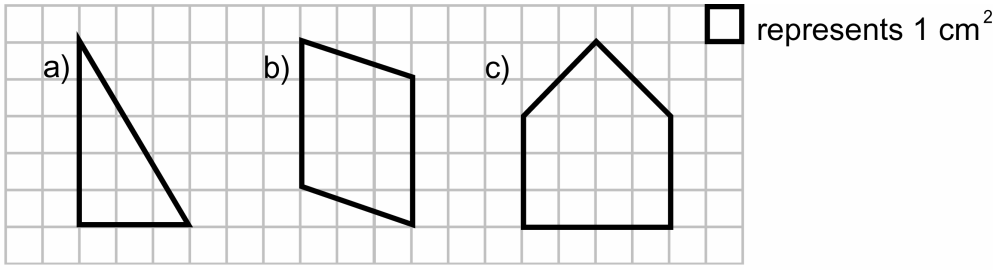
Extra Practice 5

Lesson 10: Estimating and Measuring Area

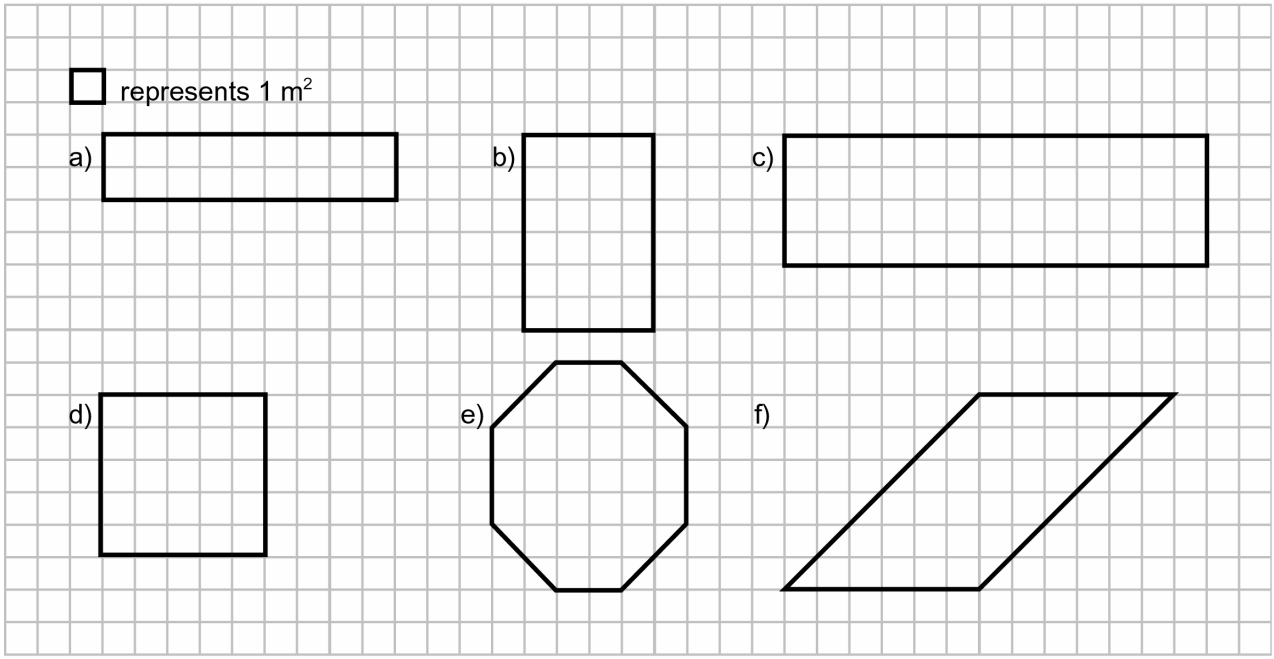
1. Find the approximate area of each figure.



2. Order the figures in question 1 from greatest area to least area.

Lesson 11: Finding Area in Square Metres

1. Find the area of each figure.
   Find the area of the grid.



2. Order the figures from least area to greatest area.

Name _____ Date _____

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Extra Practice 6

Lesson 12: Exploring Figures with Equal Perimeters

1. Use 1-cm grid paper.
   Draw all possible rectangles with perimeter 12 cm.

2. Suppose each square represents 1 square metre.
   Which rectangle from question 1 would you choose to make a pen for a dog? Explain your choice.

3. Suppose you want to make a rectangular swimming pool with perimeter 30 m.
   a) Which dimensions would give the greatest area?
   b) Which dimensions would give the least area?

Lesson 13: Exploring Figures with Equal Areas

1. Use 1-cm grid paper.
   Draw all possible rectangles with area 24 cm^2.

2. Find the perimeter of each rectangle in question 1.

3. Suppose each square represents 1 square metre.
   Which rectangle from question 1 would you choose to make a pen for a dog? Explain.

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Sample Answers

Extra Practice 1 – Master 9.26

Lesson 1

1. a) centimetres **b)** metres
c) kilometres **d)** millimetres or centimetres
e) centimetres

2. 3 lines of lengths 3 cm, 9 cm, and 16 cm

Lesson 2

1. a) 100 mm **b)** 190 mm
c) 850 mm **d)** 8 cm
e) 9 cm **f)** 1 cm

2. a) 8 cm < 95 mm **b)** 20 mm < 19 cm
c) 100 mm < 14 cm **d)** 6 cm = 60 mm
e) 75 mm < 9 cm **f)** 160 mm = 16 cm
I rewrite one measure using the same units as the other measure, and then compare the two measures.

3. a) About 50 mm; 47 mm, 4.7 cm
b) About 10 mm; 12 mm, 1.2 cm

Extra Practice 2 – Master 9.27

Lesson 3

1. a) 7 dm = 70 cm **b)** 5 dm = 50 cm
c) 3 dm = 30 cm **d)** 60 cm = 6 dm
e) 90 cm = 9 dm **f)** 45 cm = 4.5 dm

2. a) 6 dm > 40 cm **b)** 29 cm > 2 dm
c) 2 dm = 200 mm **d)** 700 mm < 8 dm

3. a) millimetres **b)** centimetres or metres
c) millimetres
d) metres

Lesson 5

1. a) 200 mm = 2 dm **b)** 3 m = 300 cm
c) 56 cm = 5.6 dm **d)** 500 cm = 5 m
e) 61 mm = 6.1 cm **f)** 24 cm = 240 mm

2. a) 2 cm, 75 mm, 2 dm
b) 140 mm, 16 cm, 3 dm
c) 50 mm, 13 cm, 2 dm
d) 4999 mm, 5 m, 501 cm

3. 3 lines of lengths 0.04 m, 1.3 dm, and 7.6 cm; Students should rewrite each measure using another unit.
0.04 m = 4 cm, 40 mm, or 0.4 dm
1.3 dm = 13 cm, 0.13 m, 130 mm
7.6 cm = 76 mm

Extra Practice 3 – Master 9.28

Lesson 6

1. a) 16 cm **b)** 8.5 cm
c) 8.7 cm

2. 16 cm, 8.7 cm, 8.5 cm

Lesson 7

1. a) 1600 m or 1.6 km **b)** 1000 m or 1 km

2. a) 2 km
b) 10 m

Extra Practice 4 – Master 9.29

Lesson 8

1. a) 15 square units **b)** 14 square units
c) 15 square units

2. 3 rectangles covering 6 squares, 3 squares, and 10 squares

Lesson 9

1. a) 15 cm^2 **b)** 7 cm^2

2. Possible rectangles:
1 cm by 12 cm, 2 cm by 6 cm, 3 cm by 4 cm

Extra Practice 5 – Master 9.30

Lesson 10

1. a) About 8 cm^2
b) About 11 cm^2 (exactly 12 cm^2)
c) 16 cm^2

2. c, b, a

Lesson 11

1. a) 18 m^2 **b)** 24 m^2
c) 52 m^2 **d)** 25 m^2
e) 34 m^2 **f)** 36 m^2

Area of grid is 780 m^2.

2. a, b, d, e, f, c

Extra Practice 6 – Master 9.31

Lesson 12

1. Possible rectangles:
1 cm by 5 cm, 2 cm by 4 cm, and 3 cm by 3 cm

2. The rectangle that has the greatest area is the 3 m by 3 m square. It has an area of 9 m^2.

3. **a)** 7 m by 8 m; an area of 56 m^2
b) 1 m by 14 m; an area of 14 m^2

Lesson 13

1. Possible rectangles:
1 cm by 24 cm, 2 cm by 12 cm, 3 cm by 8 cm, and 4 cm by 6 cm

2. 1 cm by 24 cm; perimeter = 50 cm
2 cm by 12 cm; perimeter = 28 cm
3 cm by 8 cm; perimeter = 22 cm
4 cm by 6 cm; perimeter = 20 cm

3. The 4 m by 6 m pen because it has the least perimeter, so it would be cheaper.