FPC 10 2.1 Units of Area and Volume

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Blk\_\_\_\_\_



G M k h da Unit d c m  n

1. Convert the following to the indicated measurements.

a) 240 m/s = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ km/h b) 8.4 m/s = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ km/h

c) 120 m/s = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mm/min d) 20 m/min = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ km/h

e) 72 km/h = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_m/sec f) 35 mm/s = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ km/h

1. Convert the following to the indicated measurements.

a) 76 m2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cm2 b) 4585 mm2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cm2

c) 950 000 mm2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_m2 d) 0.75 km2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ m2

e) 67 cm3 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mm3 f) 2255 mm3 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cm3

g) 89 600 m3 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ km3 h) 0.03 m3 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mm3

i) 675 cm3 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ m3 j) 163 m3 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cm3

1. Calculate the following areas to the indicated SI unit.

h = 60 cm

a) 1 km b) c) 400 m

1.5 km 45 cm

Area = \_\_\_\_\_\_\_\_\_\_\_\_\_ m2 Area = \_\_\_\_\_\_\_\_\_\_\_\_\_ m2 Area = \_\_\_\_\_\_\_\_\_\_\_\_\_ km2

1. A 2.5 km stretch of road is to be paved. The road is 14 m wide and is to be filled to a depth of 8 cm. Determine, to the nearest cubic metre, the volume of material used in paving this road.
2. A homeowner is laying sod in her lawn. The lawn is a rectangle with dimensions 8.5 m by 5.5 m. If one piece of sod is a rectangle with dimensions of 60 cm x 40 cm, approximately how many pieces of sod should the homeowner order?
3. Calculate the following volume to the indicated SI unit.

a) cube: b)

0.3 km

0.6 km

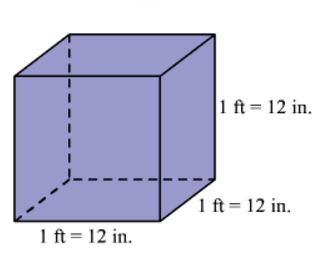
6 cm 1.25 km

Volume = \_\_\_\_\_\_\_\_\_\_\_\_\_mm3 Volume = \_\_\_\_\_\_\_\_\_\_\_\_\_m3

c) A cube with dimensions 1m by 1m by 1m in cubic centimetres.

d) A rectangular prism with dimensions 50 cm by 71 cm by 10 cm in cubic metres.

e) A rectangular prism with dimensions 0.5 m by 1 m by 5 m in cubic millimetres.



1. If one foot = 12 inches, determine the number of cubic inches in one cubic foot.
2. An acre is a measure of land 660 ft by 66 ft.

a) How many square feet in an acre?

b) 1 metre  3.28 feet. Approximately how many square metres in an acre?

c) A hectare is 100 m by 100m. How many square metres in a hectare?

d) How much larger is a hectare than an acre?

**Answers:**

**1**a. 864 b. 30.24 c. 7 200 000 d. 1.2 e. 20 f. 0.126

2a. 760 000 b. 45.85 c. 0.95 d. 750 000 e. 67 000 f. 2.235 g. 0.00009 h. 30 000 000 i. 0.0007 j. 163 000 000

3a.. 1 500 000 b. 0.15 c. 0.126 4. 2800 5. 195

6a. 216 000 b. 225 000 000 c. 1 000 000 d. 0.036 e. 2 5000 000 000 7. 1728

8a. 43 560 b. 4049 c. 10 000 d. 5951