**UNIT 3 – MEASUREMENT PART 1 - ANSWERS**

**ASSIGNMENT 1 – THE METRIC SYSTEM**

**Part A**.

1) 31 mm 2) 68 cm 3) 2 km 4) 4 m 5) 54 mm 6) 160 cm 7) 8 m

8) 125 km 9) 18 m 10) 67 m 11) 26 mm 12) 75 cm 13) 10 000 m

**Part B**

1) 38 000 m 2) 0.758 m 3) 8500 mm 4) 246 cm 5) 1.55 m

6) 0.0016 km 7) 1650 cm 8) 0.0025 km 9) 300 m 10) 670 cm

11) 45.6 dam 12) 110 000dm 13) 780 km 14) 9.2 dm

**Part C**

1) 2.65 cm 2) Yes, but only 6 steps are required

3) Stack has 41 (41.7) tiles - she has enough. 4) a)104 m b) 10 400 cm

**ASSIGNMENT 2 – IMPERIAL SYSTEM**

**Part A**

1) A = 8 B= 1 2 C= 1 15 D = 2 13

 16 16 16 16

 E = 3 8 F = 4 10 G = 5 H = 5 5

 16 16 16

2) a) 1 $\frac{8}{16}$ or 1 $\frac{1}{2}$ b) 1 $\frac{4}{16}$ or 1 $\frac{1}{4}$ c) 3 $\frac{11}{16}$ d) 4 $\frac{7}{16}$ or 4 $\frac{6}{16}$

3) a) 456 in b) 704 yd c) 39 600 ft d) 6 ft e) 1.7mi f) 0.19mi g) 288in h) 16.67 yd 4) 12 panels

**Part B**

5) a) 23 ft b) 120 in c) 38 ft d) 317 400 in e) 36 966 ft

6) 46 145 paces 7) 740 boards 8) 15 ft 4 in or 184 in remaining

9) 46 geraniums 10) 30 feet 2 inches or 30.2 ft 🡪 NO! Too big.

**Part C**

11) a) 18.75 ft b) 3 in c) 14 520 ft d) 1320 yd

**ASSIGNMENT 3 – CONVERTING MEASUREMENTS BETWEEN SYSTEMS**

1) a) 20.32 cm b) 15.2 km c) 22.86 m d) 20.42 m e) 731.52 cm

 f) 5708.7 in g) 4.92 ft h) 76.44 mi i) 10.63 in j) 1.8 ft

2) 5959.14 m

3) 173 m = 567.59 ft 70 m = 229.66 ft

4) 6.25 m 🡪 Too long for the garage.

5) 385.33 mi

6) $37.50

7) 3 in

8) 144.78 cm 🡪 Yes, it will fit.

9) 40cm

10) 7 5/8 inches

**ASSIGNMENT 4 – Metric and Imperial Estimation**

|  |  |  |
| --- | --- | --- |
| Item | Metric | Imperial |
| Length of a Translink bus | m | ft |
| Length of a $20 bill | cm | in. |
| Height of a 1-story building | m | ft |
| Width of your pencil | mm | in. |
| Size of your big screen TV | cm | in. |

|  |  |  |
| --- | --- | --- |
| Item | Metric | Imperial |
| Length of a my desk | 2 m | 5 ft |
| Length of a pencil | 20 cm | 8 in. |
| Height of a flagpole | 10 m | 30 ft |
| Width of an eraser | 2 cm | 1 in. |
| Distance from Surrey to Vancouver | 40 km | 25 mi |

**ASSIGNMENT 5 – PERIMETER**

1a) 53.6 cm b) 43.6 cm c) 7.6 m 2) 780 cm 3) 122 ft 4) 75 ft

**ASSIGNMENT 6 – CIRCUMFERENCE**

5) a) 12 ft b) 75.4 ft 6) 66.6 m

7) a) 138.2 cm b) 3 whole cakes 8) 14.3 m 9) 21 in

**ASSIGNMENT 7 – AREA**

1) 84.4 yd2 2) 339 063 ft2 3a) 12.65 m2 b) $581.65

**ASSIGNMENT 8 – SURFACE AREA**

Part A 1) 113.8 cm2 2) 2474 in2 3) 530.9 cm2  4) 1400 in2

Part B 1a) sketch b) 3888 in2 2) 10 080 in2 3) a) sketch b) 149.3 in2

4)14.7 in2 5) 36 ft2

**ASSIGNMENT 9 – Vernier Calipers**

1) 2.11 cm 2) 4.92 cm 3) 3.43 cm 4) 0.63 cm

**ASSIGNMENT 10 – MICROMETERS**

1) 17.33 mm 2) 4.24 mm 3) 13.94 mm 4) 12.99 mm 5) 0.64 mm 6) 20.55 mm