

1. write down the upper and lower bounds of the following measurements:

- (a) 121 mm correct to the nearest mm
- (b) 345.2 mm correct to the nearest 0.1 mm
- (c) 987 cm correct to the nearest cm
- (d) 54 km correct to the nearest km
- (e) 1023.4 kg correct to the nearest 0.1 kg

2. What is the smallest and largest area of a rectangle with the measurements below, given that the accuracy is to the nearest cm (answer to 2 decimal places).

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|--------------------|-------------------|--------------------|
| (a) 2×8 | (b) 4×1 | (c) 3×6 |
| (d) 11×12 | (e) 15×9 | (f) 22×13 |

3. Circles are inscribed to an accuracy of 0.1 cm. What are the smallest and largest areas for circles with the following radii? All measurements are in cm (answer to 2 decimal places)

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| (a) 1.1 | (b) 5.6 | (c) 9.2 |
| (d) 10.3 | (e) 3.2 | (f) 7.7 |

4. The base and height of triangles are measured to within 0.1 mm. What are the smallest & largest areas of triangles with the heights and bases given. All measurements are in mm (answer to 2 decimal places)

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| (a) 11.2, 1.3 | (b) 4.1, 1.2 | (c) 1.7, 3.2 |
| (d) 5.1, 6.9 | (e) 8.7, 9.1 | (f) 11.9, 23.3 |

1.

(a) 121.5 m.m.^2 , 120.5 m.m.^2

(b) 345.25 m.m.^2 , 345.15 m.m.^2

(c) 987.5 c.m. , 986.5 c.m.

(d) 54.5 k.m. , 53.5 k.m.

(e) 1023.45 k.g. , 1023.35 k.g.

2.

(a) 11.25 c.m.^2 , 21.25 c.m.^2 (b) 1.75 c.m.^2 , 6.75 c.m.^2 (c) 13.75 c.m.^2 , 22.75 c.m.^2

(d) 120.75 c.m.^2 , 143.75 c.m.^2 (e) 123.25 c.m.^2 , 147.25 c.m.^2 (f) 268.75 c.m.^2 , 303.75 c.m.^2

3.

(a) 3.46 c.m.^2 , 4.15 c.m.^2 (b) 96.77 c.m.^2 , 100.29 c.m.^2 (c) 263.02 c.m.^2 , 268.80 c.m.^2

(d) 330.06 c.m.^2 , 336.54 c.m.^2 (e) 31.17 c.m.^2 , 33.18 c.m.^2 (f) 183.85 c.m.^2 , 188.69 c.m.^2

4.

(a) 6.97 m.m.^2 , 7.59 m.m.^2 (b) 2.33 m.m.^2 , 2.59 m.m.^2 (c) 2.60 m.m.^2 , 2.84 m.m.^2

(d) 17.30 m.m.^2 , 17.90 m.m.^2 (e) 39.14 m.m.^2 , 40.03 m.m.^2 (f) 137.76 m.m.^2 , 139.52 m.m.^2