

Name:

Class/Set:

Lower and Upper Bounds

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1: Give the following bounds:

a) 4180 m^3 (nearest 10 m^3)
lower bound

b) 73100 m^2 (nearest 100 m^2)
lower bound

c) 954000 mm (nearest 1000 mm)
lower bound

d) 184 cm^3 (nearest cm^3)
lower bound

2: Give the following bounds:

a) 24.4 m
upper bound

b) 0.443 cm
upper bound

c) 7.29 min
upper bound

d) 112000 km^2 (nearest 1000 km^2)
upper bound

3: Give the following bounds:

a) 99200 km (nearest 100 km)
lower bound

upper bound

b) 82.5 kg
lower bound

upper bound

4: Give the following bounds:

a) 4460 sec (nearest 20 sec)
lower bound

b) 490 g (nearest 5 g)
lower bound

c) 70.6 cm² (nearest 0.2 cm²)
lower bound

d) 5.90 cm (nearest 0.05 cm)
lower bound

5: Give the following bounds:

a) 19000 m³ (nearest 500 m³)
upper bound

b) 26.0 cm³ (nearest 0.2 cm³)
upper bound

c) 486 km (nearest 2 km)
upper bound

d) 9500 m (nearest 50 m)
upper bound

6: Work out the following:

a) If $h = 2.1$ and $f = 5.4$, find the
lowest possible value of $h \times f$.

b) If $t = 33$ and $k = 49$, find the
highest possible value of $t + k$.

c) If $y = 77$ and $j = 25$, find the
lowest possible value of $y \div j$ (to 3 sf).

d) If $n = 2.2$ and $c = 8.6$, find the
highest possible value of $n - c$.

Answers: Lower and Upper Bounds

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1: a) 4175 m^3 b) 73050 m^2 c) 953500 mm d) 183.5 cm^3

2: a) 24.45 m b) 0.4435 cm c) 7.295 min d) 112500 km^2

3: a) 99150 km b) 82.45 kg
 99250 km 82.55 kg

4: a) 4450 sec b) 487.5 g c) 70.5 cm^2 d) 5.875 cm

5: a) 19250 m^3 b) 26.1 cm^3 c) 487 km d) 9525 m

6: a) $2.05 \times 5.35 = 10.9675$ b) $33.5 + 49.5 = 83$
 c) $76.5 \div 25.5 = 3.00$ d) $2.25 - 8.55 = -6.3$