

# Rounding, Estimating and Upper and Lower Bounds

Name:	Class:	Date:
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Mark	/ 20	%
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1) Round to the nearest whole number [1]

37.8

2) Round to the nearest 10 [1]

528

3) Round to two decimal places [1]

9.7265

4) Round to three decimal places [1]

3.9248

5) Round to 3 significant figures [1]

9415

6) Round to 1 significant figure [1]

496

7) Estimate the answer by rounding each number to 2 significant figures first [1]

$488.47 + 352.16$

8) Estimate the answer by rounding the base to 1 significant figure first [1]

$17.66^2$

9) Estimate the answer by rounding each number to 1 significant figure first

[3]

a)

$$3.8 \times 16.06 \div 3.96$$

b)

$$112.857 \times 0.113$$

c)

$$111.262 \div 0.124$$

10) The number 81 has been rounded to the nearest whole number. Find its lower and upper bounds. [1]

11) The number 300 has been rounded to the nearest 100. Find its lower and upper bounds. [1]

12) The number 48.7 has been rounded to the nearest 1 decimal place. Find its lower and upper bounds.

[1]

13) The number 90 has been rounded to 1 significant figure. Find its lower and upper bounds.

[1]

14) Find the upper and lower bounds of  $a + b$ , where  $a = 5$  and  $b = 3$  (both have been rounded to the nearest whole number).

[1]

15) Find the upper and lower bounds of  $a \times b$ , where  $a = 4$  and  $b = 5$  (both have been rounded to the nearest integer).

[1]

**16)** Find the upper and lower bounds of  $\frac{a}{b}$ , where  $a = 12$  and  $b = 10$  (both have been rounded to the nearest whole number).

[1]

**17)** Find the upper and lower bounds of  $a - b$ , where  $a = 13$  and  $b = 11$  (both have been rounded to the nearest unit).

[1]

**18)** The weight of a pram is 10 kg, correct to the nearest kg.  
Find the greatest possible weight of the pram.

[1]

## Solutions for the assessment Rounding, Estimating and Upper and Lower Bounds

1) 38

2) 530

3) 9.73

4) 3.925

5) 9420

6) 500

7)  $490 + 350 = 840$

Exact answer = 840.63

8)  $20^2 = 400$

Exact answer = 311.8756

9) a)  $4 \times 20 \div 4 = 20$

Exact answer = 15.4111111111

b)  $100 \times 0.1 = 100 \div 10 = 10$

Exact answer = 12.752841

c)  $100 \div 0.1 = 100 \times 10 = 1000$

Exact answer = 897.274193548

10)  $80.5 \leq 81 < 81.5$

11)  $250 \leq 300 < 350$

12)  $48.65 \leq 48.7 < 48.75$

13)  $85 \leq 90 < 95$

14)  $7 \leq a + b < 9$

15)  $15.75 \leq a \times b < 24.75$

16)  $1.095 \leq \frac{a}{b} < 1.316$

17)  $1 \leq a - b < 3$

18) 10.5 kg