

UNIT 4 *Rounding and Estimating*

Overhead Slides

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OS 4.1*Calculations*

1. Calculate $82.4 + 3.62$

2. Calculate $27.5 - 16.7$

3. Calculate 3.2×1.27

4. Calculate $5.6 \div 0.4$

OS 4.2*Order of Operations*

B	Brackets
O	Powers
D	Division
M	Multiplication
A	Addition
S	Subtraction

Calculate:

1. $(4 + 7) \times 3 - 4$

2. $3 + 7 \times 3 - 18 \div 3$

3. $6 \div 2 + 4 - 8 \times 3 + 1$

4. $30 \div (3 + 2) - (4 + 7) \times 6$

5. $(18 - 4) \div (4 + 3) - 6 \times 2$

OS 4.3

True or False?

Is each of the following statements *true* or *false*?

For those that are *false*, give the correct answers.

1. $3 \times 6 + 2 = 24$

2. $4 - 6 \times 2 = -4$

3. $8 \times 2 + 70 \div 2 = 51$

4. $18 + 9 \times 2 + 7 = 99$

5. $5 \times 7 - 20 \div 2 = 7.5$

6. $8 \times 3 - 2 + 9 \div 2 = 17.5$

7. $6 \times (4 + 7) - 3 \times 2 + 6 = 132$

8. $8 - 6 \div 4 + 5 = \frac{2}{9}$

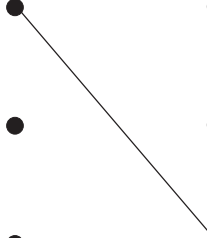
Describe how you could use brackets to make *all* the statements true.

OS 4.4

Equivalent Expressions

Match an expression from *Column A* to one in *Column B* which has the same answer.

The first one has been done for you.

<i>Column A</i>		<i>Column B</i>
(a) $(4 + 2) \times 3$ •		• (i) $4 \times 3 - 2 \times 3$
(b) $(4 - 2) \times 3$ •		• (ii) $81 \div 9 - 18 \div 9$
(c) $(18 + 6) \div 6$ •		• (iii) $4 \times 3 + 2 \times 3$
(d) $(18 - 6) \div 6$ •		• (iv) $11 \times 10 - 6 \times 10$
(e) $(11 + 6) \times 10$ •		• (v) $81 \div 9 + 18 \times 9$
(f) $(11 - 6) \times 10$ •		• (vi) $18 \div 6 + 6 \div 6$
(g) $(81 + 18) \div 9$ •		• (vii) $11 \times 10 + 6 \times 10$
(h) $(81 - 18) \div 9$ •		• (viii) $18 \div 6 - 6 \div 6$

OS 4.6

Rounding

Complete the following table, rounding the numbers to the degree of accuracy stated.

d.p. means 'decimal place(s)'
s.f. means 'significant figure(s)'

<i>Number</i>	<i>Rounded Number</i>	<i>Accuracy</i>
3.35		1 d.p.
4.721		1 s.f.
360.25		1 d.p.
11.917		2 d.p.
80.246		3 s.f.
33.565		4 s.f.
19.502		2 s.f.
141.499		1 d.p.
162.83		2 s.f.
574.6		1 s.f.
0.004631		2 s.f.

OS 4.7*Significant Figures*

Write each number to the stated number of *significant figures*.

<i>Number</i>	<i>3 s.f.</i>	<i>2 s.f.</i>	<i>1 s.f.</i>
4253	4250	4300	4000
2515			
2087			
9986			
2198			
1009			
13 004			
189 997			
1 993 349			

OS 4.8

Estimating

Complete the following table:

<i>Problem</i>	<i>Estimation Method</i>	<i>Estimate</i>	<i>Actual Answer to 3 s.f. from Calculator</i>
6.8×4.3			
$\frac{8.2 \times 9.6}{2.1}$			
$\frac{3.4 + 8.2}{9.61 - 4.68}$			
$\frac{9.8 \times 7.4}{3.5 + 4.42}$			
$\frac{116 \times 3461}{984 - 623}$			

OS 4.9*Calculator Problems*

Carry out the following calculations on your calculator.

You may need to use bracket or memory keys.

1. $3.6 \times (4.2 + 3.8) =$

2. $\frac{6.2 + 7.3}{4.2} =$

3. $\frac{8.2 + 5.9}{11.6 - 2.4} =$

4. $3 \times 4 + 5 \times 3 =$

5. $8.6 - \frac{7.2 + 3.4}{3.1} =$

6. $\frac{3.6 \times 3.5 - 7.4}{8 + 5.2 \times 9.2} =$
