Skillsheet 1-04 Order of operations *continued*

Exercises

1 Use the 'order of operations' rules for these calculations. Record each line as you complete it. Try to do these without a calculator.

a $18 + 9 \times 3$

b $(24 - 4) \div 5 + 7$

c $7 \times 6 + 4$

d $17 + 8 - 3 \times 2$

e $6 + 13 - 7$

f $7 \times 9 - 3 \times 9$

g $(24 \div 3) - 6$

h $2 \times (10 - 9) + 28$

i $15 \div (6 + 9)$

j $(8 + 2) \times (17 - 17)$

k $42 \div 7 - 5$

l $7 + 7 \times (11 - 8)$

m $9 + 28 - 12$

n $4 \times 8 - 3 \times 3$

o $109 + 36 \div 4$

p $(16 - 5 + 8) \times 9$

q $(27 + 5) \times 4$

r $(8 + 8 - 5) \times (7 + 4)$

s $(34 - 34) \times 8$

t $60 - 8 - 3 \times 4 + 20$

u $9 + 3 \times (15 - 4) - 5 \times 6$

v $16 \times 3 - 4 \times (15 - 6 \times 2) + 7$

2 Insert brackets, where necessary, to make each of these statements true.

a $3 + 8 - 7 = 4$

b $15 - 3 \times 5 = 60$

c $15 - 3 \times 5 = 0$

d $8 + 4 - 3 \times 2 = 10$

e $8 + 4 - 3 \times 2 = 6$

f $8 + 4 - 3 \times 2 = 18$

g $6 + 4 \times 0 = 6$

h $6 + 4 \times 0 = 0$

i $100 \div 10 + 10 = 5$

j $100 \div 10 + 10 = 20$

3 Insert brackets, where necessary, into these calculations to make each answer correct.

a $84 \div 3 + 9 \times 15 - 11 = 152$

b $84 \div 3 + 9 \times 15 - 11 = 64$

c $84 \div 3 + 9 \times 15 - 11 = 94$

d $84 \div 3 + 9 \times 15 - 11 = 28$

e $84 \div 3 + 9 \times 15 - 11 = 148$

f $84 \div 3 + 9 \times 15 - 11 = 544$

4 Use the four numbers listed only once with the operations +, −, ×, ÷ or brackets to write a mathematical sentence that is equal to the number in the box. (The numbers can be used in any order.)

a $2, 7, 8, 9$ $\boxed{12}$

b $1, 2, 3, 5$ $\boxed{18}$

c $3, 4, 6, 8$ $\boxed{41}$

d $2, 6, 8, 11$ $\boxed{21}$

e $2, 4, 6, 8$ $\boxed{10}$

f $2, 5, 8, 10$ $\boxed{44}$

g $3, 5, 7, 9$ $\boxed{2}$

h $4, 5, 7, 9$ $\boxed{8}$

i $2, 5, 7, 10$ $\boxed{60}$

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Skillsheet 1-04   Order of operations *continued*

Answers

1 a 45   b 11   c 46   d 19   e 12   f 36
  g 2   h 30   i 1   j 0   k 1   l 28
  m 25   n 23   o 118   p 171   q 128   r 121
  s 0   t 60   u 12   v 43

2 a $3 + 8 - 7 = 4$ b $(15 - 3) \times 5 = 60$
  c $15 - 3 \times 5 = 0$ d $8 + (4 - 3) \times 2 = 10$
  e $8 + 4 - 3 \times 2 = 6$ f $(8 + 4 - 3) \times 2 = 18$
  g $6 + 4 \times 0 = 6$ h $(6 + 4) \times 0 = 0$
  i $100 \div (10 + 10) = 5$ j $100 \div 10 + 10 = 20$

3 a $84 \div 3 + 9 \times 15 - 11 = 152$ b $84 \div 3 + 9 \times (15 - 11) = 64$
  c $84 \div (3 + 9) \times 15 - 11 = 94$ d $84 \div (3 + 9) \times (15 - 11) = 28$
  e $[(84 \div 3) + 9] \times (15 - 11) = 148$ f $[84 \div 3 + 9] \times 15 - 11 = 544$

4 a $8 + 9 - 7 + 2 = 12$ b $3 \times 5 + 2 + 1 = 18$
  c $6 \times 8 - (3 + 4) = 41$ d $6 + 11 + (8 \div 2) = 21$
  e $8 \div (4 - 2) + 6 = 10$ f $10 \times 5 - 8 + 2 = 44$
  g $(7 + 9) \div (3 + 5) = 2$ h $9 \div (4 + 5) + 7 = 8$
  i $10 \div 2 \times (5 + 7) = 60$
  Other solutions may exist.