Order of operations

Mr Lund

Order of operations

1. Eva works out $3 + 6 \times 2$ and says the answer is 18.

a) Explain the mistake that Eva has made.

b) What is the correct answer?

c) Add brackets to the calculation to make the answer 18

$$3 + 6 \times 2$$

2. Work out the calculations.

a) $10 \div 5 + 2$

b) $8 + 10 \div 2$

c) $5 + (10 \div 2)$

d) $20 + 6 \times 11 - 11$

e) $32 \div 4^2 + (10 - 5)$

f) $40 \div 8 + 2 \times 6$

g) $-15 + 4 \times 12 \div 3$

Order of operations

3. Fill in the missing numbers.

a) $8 + \square \times 3 = 20$

b) $36 = 9 \times (2^3 - \square)$

c) $-10 = 20 - \square \times 6$

d) $84 = (\square)^2 + 10 \times 2$

e) $(\square \times 2)^2 - 10 \times 2 = 16$

4. Which number sentence will give the same answer as the function machine?

$24 \div (6 + 5) \times 2$

$(24 \div 6) + (5 \times 2)$

$(24 \div 6 + 5) \times 2$

$24 \div (6 + 5 \times 2)$

Answers

Order of operations

1. Eva works out 3 + 6 × 2 and says the answer is 18.

a) Explain the mistake that Eva has made.

She did the addition first when she should have done the multiplication first.

b) What is the correct answer? 15

c) Add brackets to the calculation to make the answer 18

$(3 + 6) \times 2$

2. Work out the calculations.

a) $10 \div 5 + 2 = 4$

b) $8 + 10 \div 2 = 13$

c) $5 + (10 \div 2) = 10$

d) $20 + 6 \times 11 - 11 = 75$

e) $32 \div 4^2 + (10 - 5) = 7$

f) $40 \div 8 + 2 \times 6 = 17$

g) $-15 + 4 \times 12 \div 3 = 1$

Order of operations

3. Fill in the missing numbers.

a) $8 + 4 \times 3 = 20$

b) $36 = 9 \times (2^3 - 4)$

c) $-10 = 20 - 5 \times 6$

d) $84 = (8)^2 + 10 \times 2$

e) $(3 \times 2)^2 - 10 \times 2 = 16$

4. Which number sentence will give the same answer as the function machine?

- $24 \div (6 + 5) \times 2$
- $(24 \div 6) + (5 \times 2)$
- $(24 \div 6 + 5) \times 2$ ✓
- $24 \div (6 + 5 \times 2)$