

Task 1 – Work out the value of the following calculations.

1) $6 + 3 - 2 = 7$

2) $10 + 12 - 5 = 17$

3) $7 \times 8 - 9 = 47$

4) $(8 - 3) \times 5 = 25$

5) $4 + 24 \div 6 = 8$

6) $100 - 27 \div 9 = 97$

7) $63 - 15 \div 5 = 60$

8) $\frac{15 \times 4 - 8}{2^2} = 13$

9) $2 \times (8 - 3) = 10$

10) $(14 + 6)^2 = 400$

11) $-4 \times 7 + 21 = -7$

12) $2^2 \times 3 \div 2 = 6$

13) $3 + (8 - 5)^3 = 30$

14) $(2 \times 10) \div (40 \div 10) = 5$

15) $10 - \sqrt{36} = 4$

16) $2 \times \sqrt{25} = 10$

17) $\sqrt{3^2 + 16} \div 5 = 1$

18) $10 + 11 - 5^2 \div 5 = 16$

19) $18 \times 2 \div \sqrt{42 - 6} = 6$

20) $(\sqrt{49} - 2) \div 0.25 = 20$

Task 2 – Add brackets to make each of the following equations true. You can add more than one pair of brackets if needed.

21) $(15 - 3) \div 2 = 6$

22) $(20 + 4) \div 8 = 3$

23) $5 \times (17 - 2) = 75$

24) $(40 \div 4) \times (4 - 3) = 10$

25) $(6 \times 3 - 4) \times 3 = 42$

26) $(12 \div 4) \times (3 + 1) = 12$

27) $(\sqrt{16} + 2) \div 3 = 2$

28) $(2 + 6)^2 - 3 = 61$

29) $(15 + 6 - 3) \times (17 + 1) = 324$

30) $(15 - \sqrt{81}) \times 7 = 42$

Task 3 – Given that

$$x = 363 \div 11^2 \quad y = \frac{50}{3+2} \quad z = 16 - 2 \times 4 + 3$$

31) Work out the value of $x + y + z$

$$\begin{aligned} 363 \div 11^2 + \frac{50}{3+2} + 16 - 2 \times 4 + 3 \\ = 3 + 10 + 11 \\ = 24 \end{aligned}$$

32) Work out the value of $z - y - x$

$$11 - 10 - 3 = -2$$

33) Work out the value of $x \times y \times z$

$$3 \times 10 \times 11 = 330$$

34) Work out the value of $z + x^2$

$$11 + 3^2 = 20$$

Task 4 – Using each of the numbers 15, 3, and 2 exactly once, create as many different calculations as possible. You may use the operations +, −, ×, and ÷ once, and in any order. The result of each calculation must be an integer.

Sample answers:

$$15 + 3 - 2 = 16$$

$$15 + 2 - 3 = 14$$

$$15 - 3 + 2 = 14$$

$$15 - 2 + 3 = 16$$

$$15 \div 3 - 2 = 3$$

$$15 \div 3 + 2 = 7$$

$$3 + 15 - 2 = 16$$

$$3 + 2 - 15 = -10$$

$$3 \times 2 - 15 = -9$$

$$3 \times 15 - 2 = 43$$

$$3 \times 15 + 2 = 47$$

$$3 \times 2 + 15 = 21$$

$$2 \times 3 + 15 = 21$$

$$2 \times 15 + 3 = 33$$

$$2 + 15 \times 3 = 47$$

$$2 + 3 \times 15 = 47$$

$$2 + 15 - 3 = 14$$

$$2 + 3 - 15 = -10$$

$$2 + 15 \div 3 = 7$$

$$15 \times 2 - 3 = 27$$

$$15 \times 2 + 3 = 33$$