

# EQUALITY IN NUMBERS

Answer all of these questions. Remember to show your working out in all questions.

## MAIN QUESTIONS

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1.

$$2x + 3 = 11$$

$$\boxed{x = 4}$$

3.

$$3x - 7 = 8$$

$$\boxed{x = 5}$$

5.

$$7 - 2x = 1$$

$$\boxed{x = 3}$$

7.

$$3x/2 = 9$$

$$\boxed{x = 6}$$

9.

$$4(x - 2) = 20$$

$$\boxed{x = 7}$$

11.

$$3x + 4 = 2x + 10$$

$$\boxed{x = 6}$$

13.

$$2(3x - 1) = 16$$

$$\boxed{x = 3}$$

2.

$$5 - x = 2$$

$$\boxed{x = 3}$$

4.

$$4x + 5 = 21$$

$$\boxed{x = 4}$$

6.

$$2(x + 3) = 14$$

$$\boxed{x = 4}$$

8.

$$5x - 3 = 2x + 9$$

$$\boxed{x = 4}$$

10.

$$2x/3 + 1 = 5$$

$$\boxed{x = 6}$$

12.

$$5 - 3x = x - 7$$

$$\boxed{x = 3}$$

14.

$$x/4 + 2 = 5$$

$$\boxed{x = 12}$$

15.

$$4x - 7 = 3x + 2$$

$$\boxed{x = 9}$$

17.

$$5x/2 - 3 = 7$$

$$\boxed{x = 4}$$

19.

$$4(2x - 3) = 20$$

$$\boxed{x = 4}$$

21.

$$3x + 2 = 5x - 8$$

$$\boxed{x = 5}$$

23.

$$4x/3 + 1 = 9$$

$$\boxed{x = 6}$$

25.

$$3(2x + 1) = 4(x - 2)$$

$$\boxed{x = -5.5}$$

27.

$$4x + 3 = 7x - 9$$

$$\boxed{x = 4}$$

29.

$$3x/4 + 2 = 8$$

$$\boxed{x = 8}$$

31.

$$2(3x - 4) = 5(x + 1)$$

$$\boxed{x = 13}$$

16.

$$3(x + 2) = 2(x + 5)$$

$$\boxed{x = 4}$$

18.

$$2x + 5 = 3x - 1$$

$$\boxed{x = 6}$$

20.

$$x/3 - 2 = 4$$

$$\boxed{x = 18}$$

22.

$$2(x - 3) = 3(x + 1)$$

$$\boxed{x = -9}$$

24.

$$5x - 2 = 3x + 10$$

$$\boxed{x = 6}$$

26.

$$2x/5 - 3 = 1$$

$$\boxed{x = 10}$$

28.

$$5(x + 2) = 3(x + 6)$$

$$\boxed{x = 4}$$

30.

$$6x - 5 = 4x + 7$$

$$\boxed{x = 6}$$

32.

$$5x/2 + 3 = 13$$

$$\boxed{x = 4}$$

33.

$$7x - 4 = 5x + 8$$

|  $x = 6$

35.

$$3x/5 - 2 = 4$$

|  $x = 10$

37.

$$3(2x - 1) = 4(x + 2)$$

|  $x = 5.5$

39.

$$9x - 5 = 7x + 11$$

|  $x = 8$

34.

$$4(x - 3) = 2(2x + 1)$$

|  $x = -7$

36.

$$8x - 3 = 6x + 9$$

|  $x = 6$

38.

$$7x/3 + 1 = 8$$

|  $x = 3$

40.

$$5(2x + 3) = 3(4x - 1)$$

|  $x = 9$

## MASTER QUESTIONS



M1.

A number is doubled and then 5 is added, giving 17. Find the number.

| The number is 6

M2.

The sum of three consecutive integers is 54. Find the integers.

| The integers are 17, 18, and 19

M3.

A rectangle's length is 3cm more than its width. If the perimeter is 26cm, find the dimensions.

| The rectangle is 8cm by 5cm

M4.

Sarah is twice as old as Tom. In 5 years, their ages will sum to 55. Find their current ages.

| Sarah is 30 and Tom is 15

M5.

A number multiplied by 4 and then decreased by 7 equals the number increased by 11. Find the number.

| The number is 6

M6.

The sum of two numbers is 45, and their difference is 15. Find the numbers.

| The numbers are 30 and 15

M7.

A train travels at a constant speed. It covers 240km in 3 hours. How far will it travel in 7 hours?

| The train will travel 560km

M8.

Three-fifths of a number is 24. Find the number.

| The number is 40

M9.

The area of a square is  $144\text{cm}^2$ . Find its perimeter.

| The perimeter is 48cm

M10.

A shop sells pens for £1.20 each. If a customer spends £14.40 on pens, how many did they buy?

| They bought 12 pens