

Simultaneous Equations

1 $3 + \square = 10$

2 $\square - 9 = 23$

3 $\square \times 7 = 56$

4 $8 \times \square = 104$

5 $8 + \square = 47$

6 $\square \div 6 = 47$

7 $250 \div \square = 47$

8 $2x = 12$

9 $x + 17 = 24$

10 $9x + 4 = 40$

11 $5x - 7 = 33$

12 $3x - 19 = 11$

Simultaneous Equations

Substitute $x = 4$, $y = 9$ and $z = 8$ into the following expressions to find the answer.

13 $3x + 7 =$

14 $9x - 2y =$

15 $\frac{12x}{3y} =$

16 $\frac{24}{2x} + 3y =$

17 $5z - 3(2x + y) =$

18 $3x + x(2y + z) =$

19 $\frac{8x}{3z} + \frac{3y}{7x} =$

20 $\frac{12y}{16} - 3z =$

21 $7y - \frac{2}{3} =$

22 $\frac{3(8x+5y)}{6z} =$

23 $(4x + 3)(8x - 2) =$

24 $3(5x + 2y) - 6(z - 2y) =$

25 $x^3 =$

26 $4x^2 + 9(3y - z)^2$

Simultaneous Equations

Multiply one or both of these equations to make the x-coefficients equal.

27

$$\begin{aligned}6x + 3y &= 51 \\18x - 7y &= 41\end{aligned}$$

28

$$\begin{aligned}8x + 6y &= 186 \\5x + 7y &= 152\end{aligned}$$

29

$$\begin{aligned}9x - 3y &= 98.7 \\7x + 5y &= 99.5\end{aligned}$$

30

$$\begin{aligned}11x + 5y &= 173 \\9x - 4y &= 75.2\end{aligned}$$

31

$$\begin{aligned}3x + 4y &= 41.3 \\9x - 5y &= 64.4\end{aligned}$$

32

$$\begin{aligned}12x - 7y &= 161 \\13x - 12y &= -41\end{aligned}$$

33

$$\begin{aligned}11x + 5y &= 140.35 \\9x - 9y &= 74.25\end{aligned}$$

34

$$\begin{aligned}9x + 7y &= 192.4 \\5x - 2y &= 58.6\end{aligned}$$

35

$$\begin{aligned}8x - 3y &= 48.7 \\7x + 2y &= 56.95\end{aligned}$$

Simultaneous Equations

Solve these simultaneous equations

36

$$\begin{aligned}3x + 2y &= 29 \\3x + 7y &= 64\end{aligned}$$

37

$$\begin{aligned}6x + 2y &= 76 \\6x + 7y &= 101\end{aligned}$$

38

$$\begin{aligned}5x + 2y &= 74 \\5x + 7y &= 109\end{aligned}$$

39

$$\begin{aligned}8x + 2y &= 142 \\8x + 7y &= 197\end{aligned}$$

40

$$\begin{aligned}4x + 2y &= 27.7 \\4x + 7y &= 73.95\end{aligned}$$

41

$$\begin{aligned}6x + 2y &= 53 \\6x + 7y &= 88\end{aligned}$$

42

$$\begin{aligned}5x + 3y &= 209.75 \\3x + 3y &= 187.05\end{aligned}$$

43

$$\begin{aligned}7x + 6y &= -4.9 \\2x + 6y &= 13.6\end{aligned}$$

44

$$\begin{aligned}9x + 3y &= -62.7 \\5x + 3y &= -43.1\end{aligned}$$

45

$$\begin{aligned}6x + 5y &= 67.1 \\4x + 5y &= 49.9\end{aligned}$$

46

$$\begin{aligned}7x + 8y &= 331.8 \\3x + 8y &= 183.8\end{aligned}$$

47

$$\begin{aligned}5x + 9y &= 89.05 \\11x - 9y &= -40.25\end{aligned}$$

48

$$\begin{aligned}4x - 7y &= -42 \\3x - 7y &= -37.1\end{aligned}$$

Simultaneous Equations

49

$$\begin{aligned}4x - 3y &= 51 \\ 3x - 7y &= 81\end{aligned}$$

50

$$\begin{aligned}3x - 2y &= -16 \\ 5x + 7y &= 25\end{aligned}$$

51

$$\begin{aligned}3x + 2y &= 60.2 \\ 5x + 7y &= 133.7\end{aligned}$$

52

$$\begin{aligned}11x - 2y &= -149 \\ 8x + 7y &= 103\end{aligned}$$

53

$$\begin{aligned}4x - 2y &= 4 \\ 6x - 7y &= 38\end{aligned}$$

54

$$\begin{aligned}8x + 2y &= -96 \\ 6x - 7y &= -38\end{aligned}$$

55

$$\begin{aligned}5x - y &= -75.1 \\ 3x + 3y &= -62.7\end{aligned}$$

56

$$\begin{aligned}7x + 5y &= -6 \\ 2x + 6y &= -52\end{aligned}$$

57

$$\begin{aligned}9x + 2y &= 52.3 \\ 5x - 3y &= 45.5\end{aligned}$$

58

$$\begin{aligned}6x - 7y &= 127.4 \\ 4x - 5y &= 87\end{aligned}$$

59

$$\begin{aligned}7x - 8y &= 309 \\ 3x + 9y &= 207\end{aligned}$$

60

$$\begin{aligned}5x + 2y &= 67.6 \\ 11x - 9y &= 198.3\end{aligned}$$

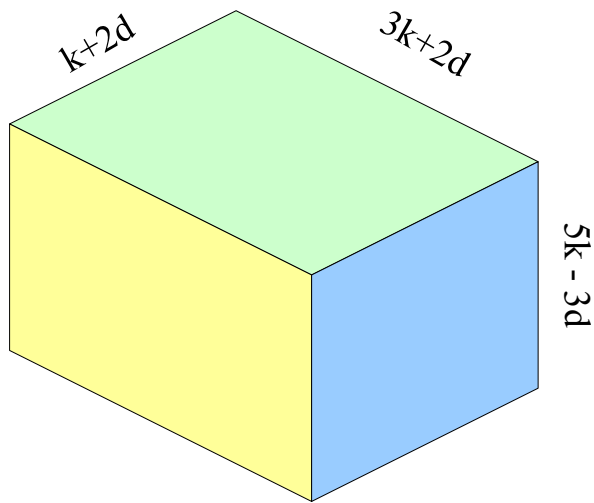
Challenge

$$\begin{aligned}3w + 7x - 2y + 3z &= -6 \\ 8x + 3z + 2y &= -24 \\ 6w + 5x - 5z &= 87 \\ 5w - 4y &= 17\end{aligned}$$

Simultaneous Equations

The values of k and d are the same in both diagrams.

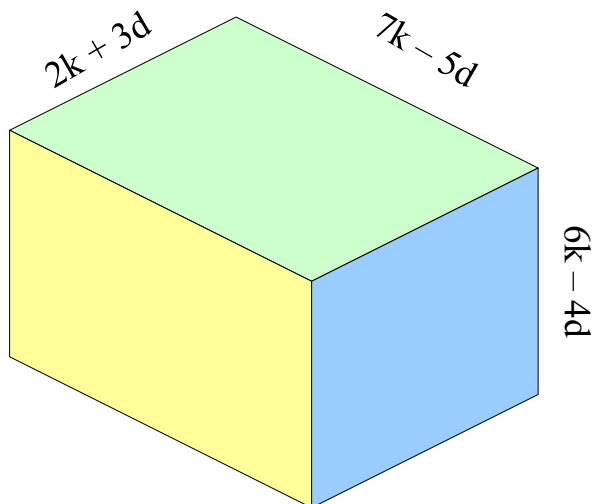
Find the values of k and d given the following information?



Length of edges = 192 cm

Surface Area = 1486 cm^2

Volume = 3696 cm^3



Length of edges = 228 cm

Surface Area = 2164 cm^2

Volume = 6840 cm^3