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

$$6x + 3y = 51$$
$$18x - 7y = 41$$

28

$$8x + 6y = 186$$
$$5x + 7y = 152$$

29

$$9x - 3y = 98.7$$
$$7x + 5y = 99.5$$

30

$$11x + 5y = 173$$
$$9x - 4y = 75.2$$

31

$$3x + 4y = 41.3$$
$$9x - 5y = 64.4$$

32

$$12x - 7y = 161$$
$$13x - 12y = -41$$

33

$$11x + 5y = 140.35$$
$$9x - 9y = 74.25$$

34

$$9x + 7y = 192.4$$
$$5x - 2y = 58.6$$

35

$$8x - 3y = 48.7$$
$$7x + 2y = 56.95$$

Simultaneous Equations

Solve these simultaneous equations

36

$$3x + 2y = 29$$
$$3x + 7y = 64$$

37

$$6x + 2y = 76$$
$$6x + 7y = 101$$

38

$$5x + 2y = 74$$
$$5x + 7y = 109$$

39

$$8x + 2y = 142$$
$$8x + 7y = 197$$

40

$$4x + 2y = 27.7$$
$$4x + 7y = 73.95$$

41

$$6x + 2y = 53$$
$$6x + 7y = 88$$

42

$$5x + 3y = 209.75$$
$$3x + 3y = 187.05$$

43

$$7x + 6y = -4.9$$
$$2x + 6y = 13.6$$

44

$$9x + 3y = -62.7$$
$$5x + 3y = -43.1$$

45

$$6x + 5y = 67.1$$
$$4x + 5y = 49.9$$

46

$$7x + 8y = 331.8$$
$$3x + 8y = 183.8$$

47

$$5x + 9y = 89.05$$
$$11x - 9y = -40.25$$

48

$$4x - 7y = -42$$
$$3x - 7y = -37.1$$

Simultaneous Equations

49

$$4x - 3y = 51$$
$$3x - 7y = 81$$

50

$$3x - 2y = -16$$
$$5x + 7y = 25$$

51

$$3x + 2y = 60.2$$
$$5x + 7y = 133.7$$

52

$$11x - 2y = -149$$
$$8x + 7y = 103$$

53

$$4x - 2y = 4$$
$$6x - 7y = 38$$

54

$$8x + 2y = -96$$
$$6x - 7y = -38$$

55

$$5x - y = -75.1$$
$$3x + 3y = -62.7$$

56

$$7x + 5y = -6$$
$$2x + 6y = -52$$

57

$$9x + 2y = 52.3$$
$$5x - 3y = 45.5$$

58

$$6x - 7y = 127.4$$
$$4x - 5y = 87$$

59

$$7x - 8y = 309$$
$$3x + 9y = 207$$

60

$$5x + 2y = 67.6$$
$$11x - 9y = 198.3$$

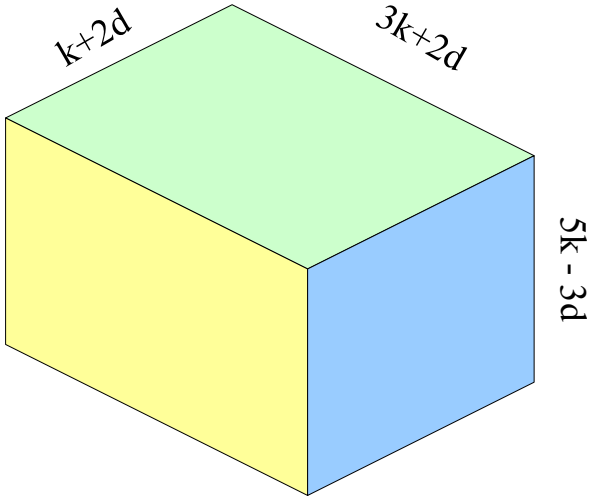
Challenge

$$3w + 7x - 2y + 3z = -6$$
$$8x + 3z + 2y = -24$$
$$6w + 5x - 5z = 87$$
$$5w - 4y = 17$$

Simultaneous Equations

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

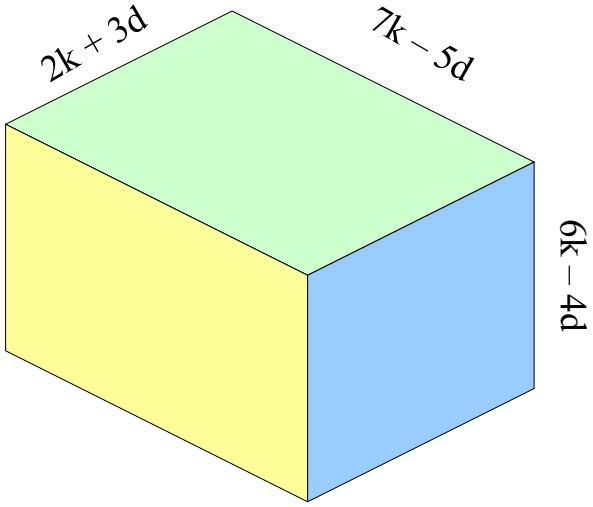
Find the values of k and d given the following information?



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