

※ You will receive 1.5 points for each correct answer for problems 1 to 30.

1. Calculate the answer.

$$12 \times 3 - 98 \div 7 + 9$$

- Ⓐ 30
- Ⓑ 31
- Ⓒ 32
- Ⓓ 33
- Ⓔ 34

2. Calculate the answer.

$$(5 + 6) \times (11 - (25 - 7) \div 6)$$

- Ⓐ 76
- Ⓑ 79
- Ⓒ 82
- Ⓓ 85
- Ⓔ 88

3. Calculate the answer.

$$\begin{array}{r} 6.4 \\ + 2.93 \\ \hline \end{array}$$

- Ⓐ 8.23
- Ⓑ 8.33
- Ⓒ 9.23
- Ⓓ 9.33
- Ⓔ 9.43

4. Calculate the answer.

$$2.57 + 18.7$$

- Ⓐ 20.27
- Ⓑ 20.64
- Ⓒ 21.27
- Ⓓ 21.64
- Ⓔ 22.27

5. Calculate the answer.

$$\begin{array}{r} 7.5 \\ - 4.84 \\ \hline \end{array}$$

- Ⓐ 2.34
- Ⓑ 2.66
- Ⓒ 2.86
- Ⓓ 3.74
- Ⓔ 3.96

6. Calculate the answer.

$$28.6 - 4.56$$

- Ⓐ 23.04
- Ⓑ 23.56
- Ⓒ 24.04
- Ⓓ 24.54
- Ⓔ 24.96

7. Calculate the answer.

$$\begin{array}{r} 3.96 \\ \times 1.6 \\ \hline \end{array}$$

- Ⓐ 5.672
- Ⓑ 5.826
- Ⓒ 6.072
- Ⓓ 6.336
- Ⓔ 6.516

8. Find the greatest common factor for this set of numbers.

18, 30

- Ⓐ 2
- Ⓑ 3
- Ⓒ 6
- Ⓓ 9
- Ⓔ 15

9. Find the greatest common factor for this set of numbers.

64, 112

- Ⓐ 8
- Ⓑ 16
- Ⓒ 24
- Ⓓ 28
- Ⓔ 32

10. Find the greatest common factor for this set of numbers.

72, 99, 117

- Ⓐ 9
- Ⓑ 11
- Ⓒ 13
- Ⓓ 15
- Ⓔ 17

11. Find the least common multiple for this set of numbers.

48, 56

- Ⓐ 256
- Ⓑ 286
- Ⓒ 308
- Ⓓ 336
- Ⓔ 368

12. Find the least common multiple for this set of numbers.

32, 88

- Ⓐ 316
- Ⓑ 352
- Ⓒ 390
- Ⓓ 446
- Ⓔ 484

13. Find the least common multiple for this set of numbers.

15, 25, 30

- Ⓐ 150
- Ⓑ 175
- Ⓒ 200
- Ⓓ 225
- Ⓔ 250

14. Solve the fraction into its simplest form.

$\frac{24}{72}$

- Ⓐ $\frac{8}{9}$
- Ⓑ $\frac{2}{3}$
- Ⓒ $\frac{4}{9}$
- Ⓓ $\frac{3}{8}$
- Ⓔ $\frac{1}{3}$

15. Solve the fraction into its simplest form.

$$\frac{72}{84}$$

- Ⓐ $\frac{4}{7}$
- Ⓑ $\frac{7}{9}$
- Ⓒ $\frac{5}{6}$
- Ⓓ $\frac{6}{7}$
- Ⓔ $\frac{8}{9}$

16. Solve the fraction into its simplest form.

$$\frac{69}{115}$$

- Ⓐ $\frac{2}{5}$
- Ⓑ $\frac{3}{5}$
- Ⓒ $\frac{3}{7}$
- Ⓓ $\frac{4}{7}$
- Ⓔ $\frac{7}{9}$

17. Calculate the answer.

$$5\frac{1}{9} + \left(3 - 1\frac{8}{9}\right)$$

- Ⓐ $5\frac{2}{9}$
- Ⓑ $5\frac{7}{9}$
- Ⓒ $6\frac{2}{9}$
- Ⓓ $6\frac{8}{9}$
- Ⓔ $7\frac{1}{9}$

18. Calculate the answer.

$$5 - 2\frac{8}{13} + 3\frac{9}{13}$$

- Ⓐ $6\frac{4}{13}$
- Ⓑ $6\frac{1}{13}$
- Ⓒ $5\frac{11}{13}$
- Ⓓ $5\frac{7}{13}$
- Ⓔ $5\frac{1}{13}$

19. Calculate the answer.

$$2\frac{5}{8} + 1\frac{13}{16}$$

- Ⓐ $3\frac{5}{16}$
- Ⓑ $3\frac{11}{16}$
- Ⓒ $4\frac{1}{16}$
- Ⓓ $4\frac{7}{16}$
- Ⓔ $4\frac{13}{16}$

20. Calculate the answer.

$$1\frac{7}{12} + 4\frac{4}{15}$$

- Ⓐ $5\frac{17}{20}$
- Ⓑ $5\frac{53}{60}$
- Ⓒ $5\frac{29}{30}$
- Ⓓ $6\frac{7}{60}$
- Ⓔ $6\frac{11}{60}$

21. Calculate the answer.

$$7\frac{5}{6} - 3\frac{17}{18}$$

- Ⓐ $3\frac{5}{9}$
- Ⓑ $3\frac{13}{18}$
- Ⓒ $3\frac{8}{9}$
- Ⓓ $4\frac{1}{18}$
- Ⓔ $4\frac{4}{9}$

22. Calculate the answer.

$$3\frac{6}{7} \times 2\frac{1}{9}$$

- Ⓐ $6\frac{1}{9}$
- Ⓑ $6\frac{2}{7}$
- Ⓒ $8\frac{1}{7}$
- Ⓓ $8\frac{3}{7}$
- Ⓔ $8\frac{4}{9}$

23. Calculate the answer.

$$4\frac{7}{12} \div 1\frac{3}{8}$$

- Ⓐ $3\frac{1}{6}$
- Ⓑ $3\frac{1}{3}$
- Ⓒ $4\frac{1}{6}$
- Ⓓ $4\frac{1}{4}$
- Ⓔ $4\frac{1}{3}$

24. Calculate the answer.

$$\frac{5}{6} \times \frac{9}{16} \div 2.5$$

- Ⓐ $\frac{5}{32}$
- Ⓑ $\frac{3}{16}$
- Ⓒ $\frac{9}{25}$
- Ⓓ $\frac{9}{16}$
- Ⓔ $\frac{25}{32}$

25. Calculate the answer.

$$1\frac{7}{15} \div 3.3 \div \frac{4}{5}$$

- Ⓐ $\frac{5}{9}$
- Ⓑ $\frac{2}{3}$
- Ⓒ $\frac{11}{15}$
- Ⓓ $\frac{7}{9}$
- Ⓔ $\frac{13}{15}$

26. Calculate the answer.

$$7.6 \overline{) 34.7}$$

- Ⓐ 4.46 0.062
- Ⓑ 4.51 0.034
- Ⓒ 4.56 0.044
- Ⓓ 4.62 0.072
- Ⓔ 4.68 0.012

27. Solve the equation.

$$x \div 3.6 \times 2\frac{4}{7} = 10$$

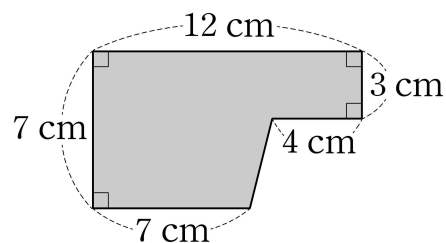
- Ⓐ 10
- Ⓑ 11
- Ⓒ 12
- Ⓓ 13
- Ⓔ 14

28. Solve the equation.

$$\left(x + \frac{1}{3}\right) \div 5 = 1\frac{1}{6}$$

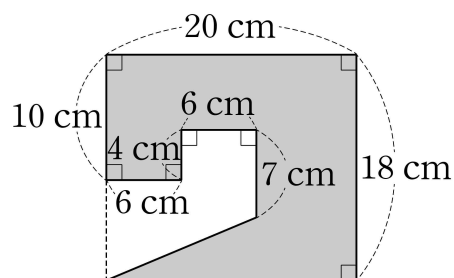
- Ⓐ $5\frac{1}{2}$
- Ⓑ $5\frac{2}{3}$
- Ⓒ $5\frac{3}{4}$
- Ⓓ $6\frac{1}{6}$
- Ⓔ $6\frac{1}{3}$

29. Find the area of the figure.



- Ⓐ 54 cm^2
- Ⓑ 57 cm^2
- Ⓒ 60 cm^2
- Ⓓ 63 cm^2
- Ⓔ 66 cm^2

30. Find the area of the shaded section.



- Ⓐ 270 cm^2
- Ⓑ 276 cm^2
- Ⓒ 282 cm^2
- Ⓓ 288 cm^2
- Ⓔ 294 cm^2

※ You will receive 2.0 points for each correct answer for problems 31 to 40.

- 31.** Griffin studied English and mathematics today. He studied English for 2 hours and 32 minutes, and mathematics for 1140 seconds longer than he studied English. How many minutes did he study today?

_____ minutes

- 32.** There is a trapezoid where the lengths of the two bases are 7cm and 9cm, respectively. When the height of this trapezoid is 13cm, what is the area of the trapezoid?

_____ cm^2

- 33.** Hendrix has 83.21L of gasoline. If he used 24.87L of gasoline a day for two days, how much gasoline would he have left? Write down only the decimal part of the answer (for example, if the answer is 1.23L write down as 23).

- 34.** Irene has 84 red marbles, 56 blue marbles, and 63 yellow marbles. She is trying to evenly divide each color between as many children as possible. How many marbles in total would each child get?

_____ marbles

- 35.** Jarry tries to make a square using 63cm by 54cm rectangular colored papers. To fit into the smallest possible square, how many sheets of colored paper are needed? (The papers should not overlap.)

_____ sheets of colored paper

- 36.** Kate has $12\frac{1}{4}$ m of colored ribbon. She used $5\frac{3}{5}$ m of the ribbon to wrap a present. How many centimeters of colored ribbon does she have left?

_____ cm

37. Two years ago, Logan was $1\frac{1}{5}$ m tall. He grew $\frac{1}{15}$ m taller last year and $\frac{1}{12}$ m taller this year. How tall is Logan now? If the answer is $A\frac{C}{B}$ m, write the sum $A+B+C$. (Note that $\frac{C}{B}$ is the simplest fraction.)
- _____

38. Monica's calf weighed $21\frac{1}{4}$ kg at birth. When it grew up and became an adult cow, how much did it weigh if it was $28\frac{4}{5}$ times its weight at birth?
- _____ kg

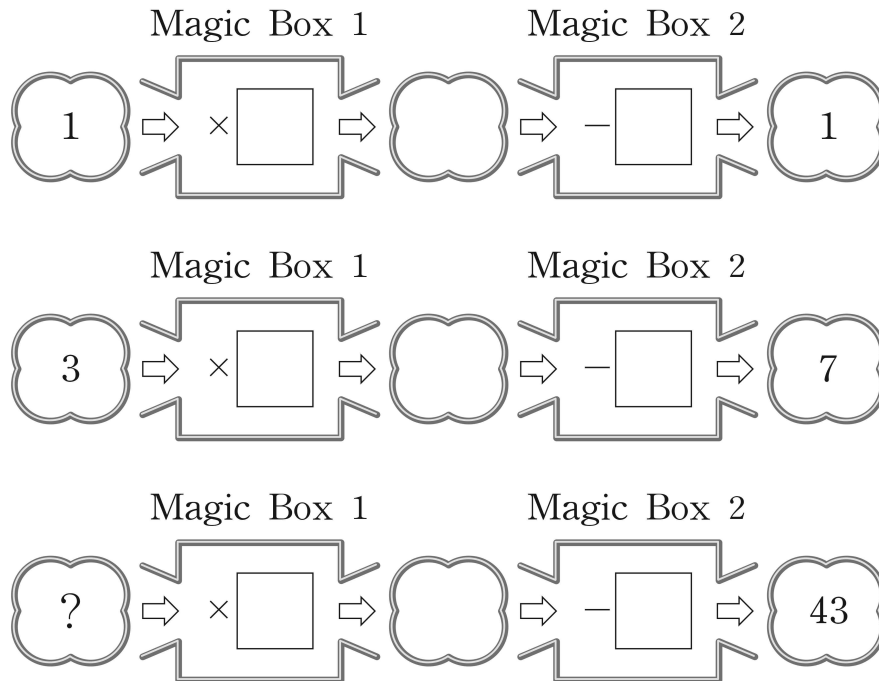
- 39.** A bookstore has 1675 books. Of these books, 16% were published this year. How many books in the bookstore were published this year?

_____ books

- 40.** Nathan raises a total of 187 cows, pigs, and horses. The ratio of cows, pigs, and horses is $3:7:1$. How many pigs does he raise?

_____ pigs

41. There is Magic Box 1 for multiplication and Magic Box 2 for subtraction.



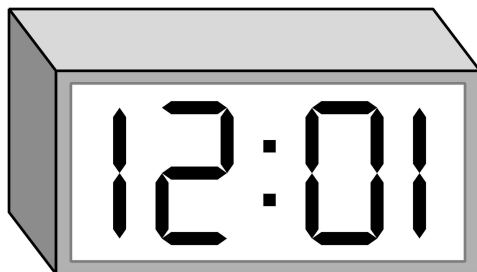
Using the two examples, find the initial value when the result is 43. [2.3 points]

Answer : _____

42. There is a large container of water and three beakers that can hold 3L, 5L, and 8L. The act of pouring water from the large container into one beaker, and the act of transferring water from one beaker to another, is considered one time each. How many times is the minimum required to make 7L? [3.3 points]

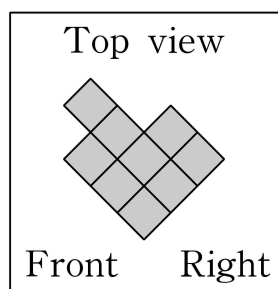
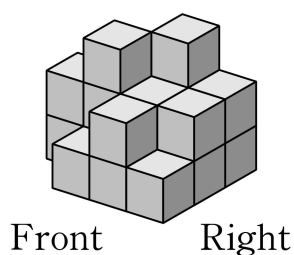
Answer : _____ times

43. Mario went to a restaurant 12 minutes away from his home after looking at the clock in the mirror, as shown in the picture. If the restaurant says it opens at 12:00, how many minutes should he wait? [4.3 points]



Answer : _____ minutes

44. All the wooden blocks are colored except for the bottom face. How many colored faces are there in total? [4.3 points]



Answer : _____ faces

45. Linda has one quarter, two dimes, and two nickels. How many different amounts of money can she make by using at least one coin?

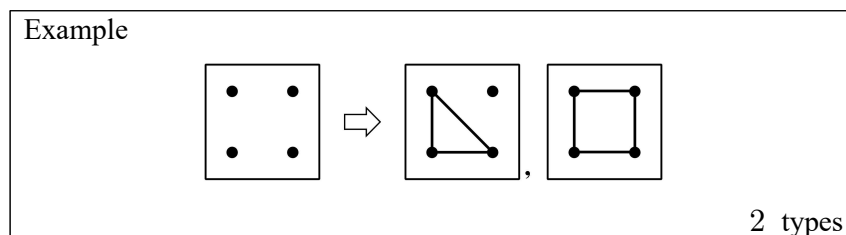
(Hint: a quarter = 25 cents, a dime = 10 cents, a nickel = 5 cents) [4.3 points]

Answer : _____ different amounts of money

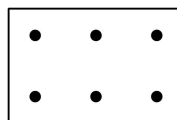
46. The total number of ducks and pigs Elliot has is 20, and the total number of legs is 54. How many pigs does Elliot have? [3.3 points]

Answer : _____ pigs

47. There is a geoboard with four points on it. There are two different types of figure that can be made from line segments connecting points on this geoboard.



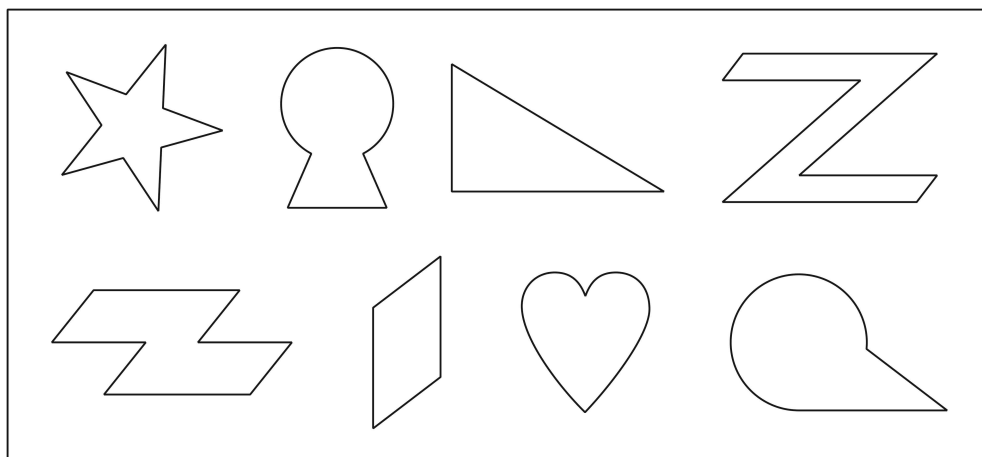
How many different types of figure can you make from line segments that connect points on a six-point geoboard? [3.3 points]



Answer : _____ types

48. How many of the following figures are symmetrical along a straight line?

[2.3 points]



Ⓐ 3

Ⓑ 4

Ⓒ 5

Ⓓ 6

Answer : _____

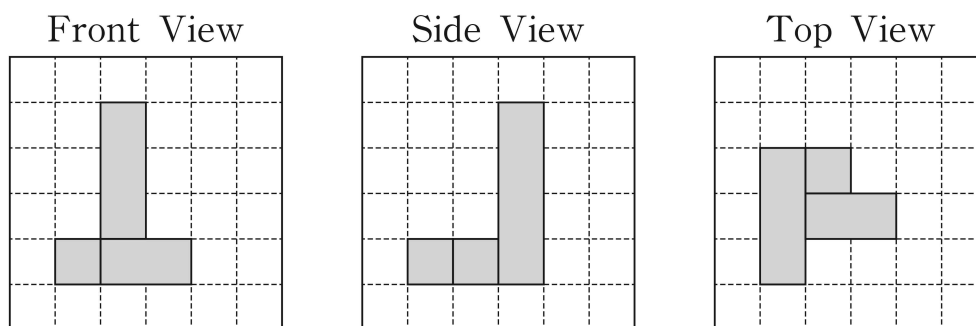
49. Which of the following information cannot be used to draw a triangle?

[3.3 points]

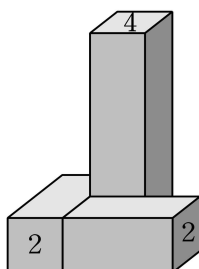
- Ⓐ Two sides are 5cm and 6cm and the angle between the sides is 100° .
- Ⓑ Two sides are 3cm and 3cm and two angles are 45° and 60° .
- Ⓒ One side is 9cm and two angles are 120° and 50° .
- Ⓓ Three sides are 6cm, 8cm and 10cm.

Answer : _____

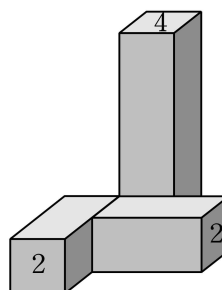
50. The front, side, and top views of a set of blocks are given. Find the correct set of blocks. [4.3 points]



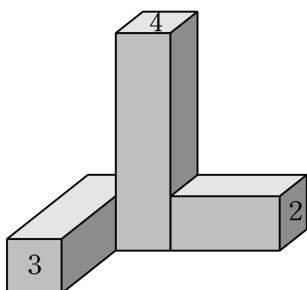
Ⓐ



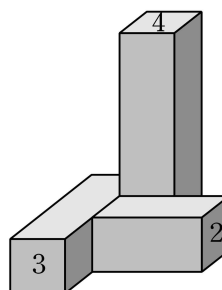
Ⓑ



Ⓒ



Ⓓ



Answer : _____