

※ You can receive 1.5 points each for problems number 1 to 30.

In problems 1-6, solve each question. Then add the quotient and the remainder as your answer. (For example, if the quotient is 5 and the remainder is 0, then the final answer is $5+0=5$. If the quotient is 12 and the remainder is 8, then the final answer is $12+8=20$.)

1.

$$8 \overline{) 96}$$

2.

$$7 \overline{) 93}$$

3.

$$27 \overline{) 229}$$

4.

$$39 \overline{) 300}$$

5.

$$82 \overline{) 472}$$

6.

$$64 \overline{) 3366}$$

In problems 7-13, calculate the answer.

7. $42 \div (3 + 4) \times 6$

8. $4 \times 9 - 15 \div 3 - 5$

9. $(11 + 5) \times 3 - 28 \div 4$

10. $52 - 3 \times 6 \div 9$

11. $(74 - 38) \div 4 + 5 \times 6$

12. $7 \times 9 - 48 \div 8 \times 2 - 19$

13. $32 - 90 \div ((11 - 4) \times 5 - 17)$

In problems 14-16, solve each question. Then add all the numbers of different units. (For example, if the answer is 3(km, kg, L) 54(m, g, mL), then write the final answer as $3 + 54 = 57$.)

14.

$$\begin{array}{r} 6 \text{ km } 411 \text{ m} \\ - 2 \text{ km } 508 \text{ m} \\ \hline \end{array}$$

15.

$$\begin{array}{r} 3 \text{ kg } 838 \text{ g} \\ + 4 \text{ kg } 276 \text{ g} \\ \hline \end{array}$$

16.

$$\begin{array}{r} 12 \text{ L } 260 \text{ mL} \\ - 5 \text{ L } 530 \text{ mL} \\ \hline \end{array}$$

17. Express the following time in hours (A), minutes (B), and seconds (C), then find the sum of A, B, and C.

9707 seconds

In problems 18-19, solve each question. Then add all the numbers of different units. (For example, if the answer is 7 hr 34 min 23 sec, then write the final answer as $7 + 34 + 23 = 64$.)

18.

$$\begin{array}{r} 4 \text{ hr } 27 \text{ min } 49 \text{ sec} \\ + 5 \text{ hr } 46 \text{ min } 28 \text{ sec} \\ \hline \end{array}$$

19.

$$\begin{array}{r} 7 \text{ hr } 51 \text{ min } 17 \text{ sec} \\ - 3 \text{ hr } 57 \text{ min } 39 \text{ sec} \\ \hline \end{array}$$

In problems 20-21, write each fraction into its simplest form. Then add the numerator and the denominator. (For example, if the answer is $\frac{2}{3}$, then write the final answer as $2+3=5$.)

20. $\frac{45}{81}$

21. $\frac{78}{143}$

In problems 22-27, solve each equation as a proper fraction or a mixed number in its simplest form. Then write the numerator. (For example, if the answer is $3\frac{10}{6}$, make $4\frac{2}{3}$ and write the final answer as 2.)

22. $7\frac{5}{9} - 2\frac{7}{9}$

23. $1\frac{8}{13} + \left(3\frac{2}{13} - 1\frac{7}{13}\right)$

24. $1\frac{7}{12} + 3\frac{11}{16}$

25. $5\frac{2}{7} - 1\frac{5}{6}$

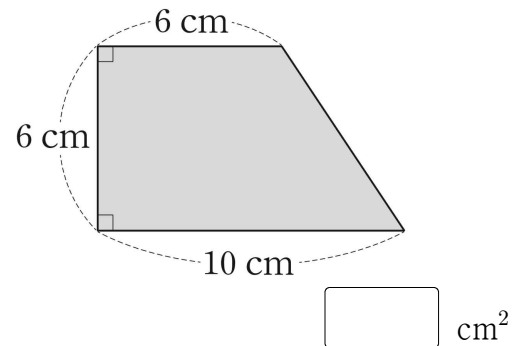
26. $3\frac{1}{5} \times 2\frac{5}{8}$

27. $2\frac{5}{6} \div 5.1 \times \frac{8}{15}$

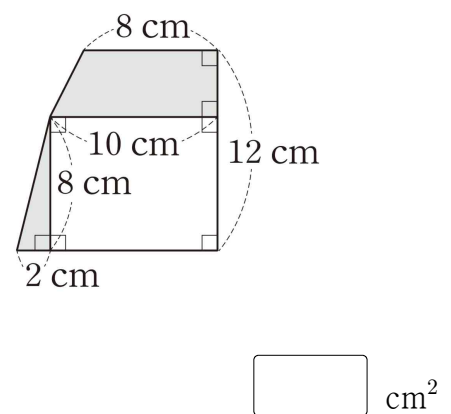
28. Solve the question. Then write the decimal part as your answer. (For example, if the answer is 18.2 or 18.20, then write the final answer as 2. If the answer is 2.54 or 2.054, then write the final answer as 54.)

11.6 – 6.82

29. Find the area of the trapezoid.



30. Find the area of the shaded section.



※ You can receive 2.0 points each for problems number 31 to 40.

- 31.** Judy can make one necklace in 4 days. She made necklaces for 3 weeks without a break. How many necklaces did she make in total?

_____ necklaces

- 32.** 450 books are being divided equally into 12 bookshelves. There are 6 books that have not been put on the bookshelf. How many books are there on each bookshelf?

_____ books

- 33.** Roy went to the market to buy something. It took him 29 minutes to get from his home to the market, 1 hour and 17 minutes to choose what to buy, and 32 minutes to get back home from the market. How long did it take Roy in total? Write your answer in hr/min and then add the two numbers. (For example, if the answer is 4hr 56min, then write as $4 + 56 = 60$. When answering with hr/min, minutes are less than 60.)

- 34.** Michelle bought 4 donuts that cost \$4 for 8 donuts and 9 muffins that cost \$8 for 6 muffins. Find how much change Michelle should receive if she paid with a \$100 bill.

\$ _____

- 35.** Watson traveled for 1 hour by car going 5 km in 4 minutes and 1 hour by bicycle going 2 km in 5 minutes. What is the total distance he traveled?

_____ km

- 36.** A pen costs 3 quarters and an eraser costs 2 dimes. What is the difference between the number of pens bought for \$15 and the number of erasers bought for \$15? (Hint: a quarter = 25 cents, a dime = 10 cents)

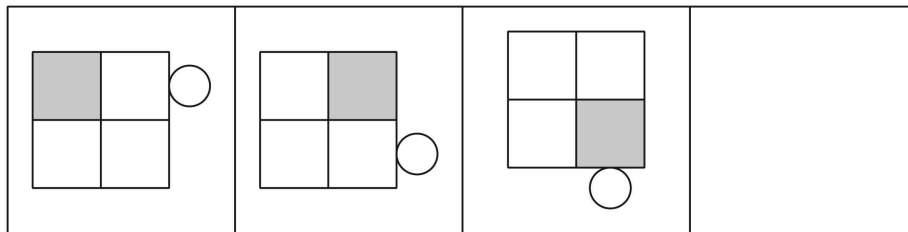
- 37.** There is a basket of fruits containing apples and oranges. The apples weigh $2\frac{5}{9}$ kg, the oranges weigh $1\frac{2}{9}$ kg, and the basket weighs $\frac{8}{9}$ kg. How much does the entire fruit basket weigh? If the answer is $A\frac{C}{B}$ kg, write the value of $A + B + C$. (Note that $\frac{C}{B}$ is an irreducible fraction and $C < B$)
- _____

- 38.** Susan has 2.35 L of grape juice. If she drinks 1.57 L, how much grape juice will be left? Write down only the decimal part of the answer. (For example, if the answer is 1.23 L, write down as 23.)
- _____

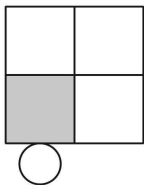
- 39.** Bill and Kate are reading books. Bill read books for $1\frac{2}{3}$ hours, and Kate read books for $2\frac{3}{7}$ hours longer than Bill. How many hours did Kate read? Write down the sum of the denominator and numerator of the mixed number result in its simplest form. (For example, if the answer is $1\frac{2}{3}$, write down as $3 + 2 = 5$.)
- _____

- 40.** There is a rectangular piece of paper. The paper has a base of 2.4 m and a height of $3\frac{1}{3}$ m. What is the area of this paper?
- _____ m²

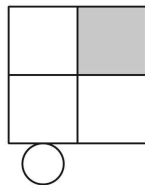
41. Which of the following figures should go in the blank box to complete the pattern? [2.3 points]



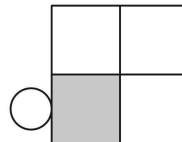
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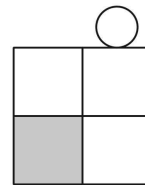
②



③



④



Answer : _____

42. Find the value in the ones place of the product you will get after multiplying 3 by itself 10 times. [2.3 points]

$$\begin{array}{c} 3 \times 3 \times \dots \times 3 \\ \underbrace{\hspace{1.5cm}}_{10 \text{ times}} \end{array}$$

Answer : _____

- 43.** Amelia, Peterson, Sally, and Terry each has either a dog, a cat, a hamster, or a bird. Each person has a different pet. Using the following statements, find which animal Terry has. [3.3 points]

- (1) Amelia has a dog.
(2) Peterson does not have a hamster or a bird.
(3) Sally is friends with the hamster owner.

- ① dog ② cat ③ hamster ④ bird

Answer : _____

- 44.** Two numbers, $\bigcirc$ and $\triangle$, have a sum of 21 and a product of 80. What is the difference of $\bigcirc$ and $\triangle$? [3.3 points]

$$\begin{aligned}\bigcirc + \triangle &= 21 \\ \bigcirc \times \triangle &= 80\end{aligned}$$

Answer : _____

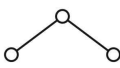
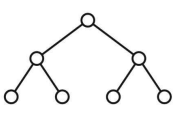
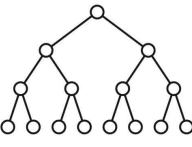
45. In the calendar below, when the sum of all Saturday dates is divided by 7, the remainder is 0. What date is the third Wednesday?

[3.3 points]

Sun	Mon	Tue	Wed	Thu	Fri	Sat

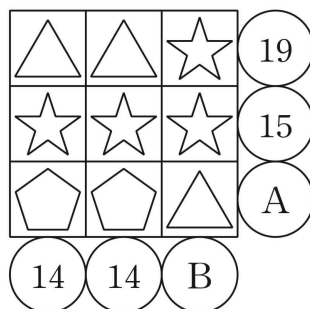
Answer : _____

46. In the following figure, circles were arranged following a certain rule. How many circles should be arranged in the fourth figure? [3.3 points]

			
3	7	15	

Answer : _____ circles

47. $\triangle$, $\star$, and $\square$ below represent unknown numbers. Each row will add up to the number on the right, and each column will add up to the number at the bottom. What is the product of A and B? [4.3 points]



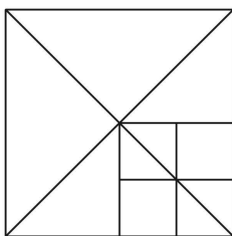
Answer : _____

48. How many numbers greater than 10 can you make using the number cards shown below? [4.3 points]



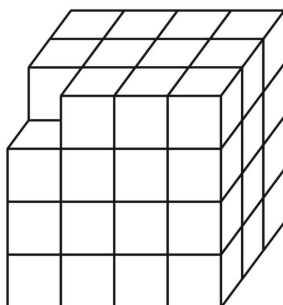
Answer : _____ numbers

- 49.** In the following figure how many large and small triangles can you find in total? [4.3 points]



Answer : _____ triangles

- 50.** The following solid figure was made from 47 blocks. If you paint the whole surface of the solid figure including the bottom, how many pieces have exactly 3 painted faces? [4.3 points]



Answer : _____ pieces