

Alex has forgotten the two digits of the password of the four-digit bike lock, as shown in the picture. What is the difference between the largest and the smallest possible password provided that the X and Y numbers are different numbers? (9X7Y)



- A) 808 B) 88 C) 907 D) 97

Which two fractions are equivalent?

- A) $\frac{2}{5}$ and $\frac{8}{22}$
B) $\frac{5}{10}$ and $\frac{10}{40}$
C) $\frac{6}{12}$ and $\frac{8}{24}$
D) $\frac{4}{3}$ and $\frac{12}{9}$

A supermarket has some types of pasta that are Spaghetti, Penne, and Ravioli in a ratio of 7 : 2 : 5. If there are 16 Penne, then how many pasta are there in total?

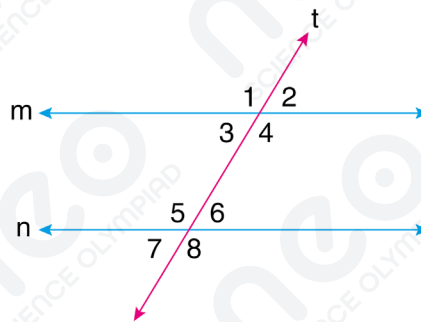
- A) 92
B) 112
C) 122
D) 132

What are the next two terms of the sequence?

4, 7, 10, 13, ...,

- A) 16 and 19
- B) 16 and 18
- C) 15 and 19
- D) 15 and 18

The lines m and n are parallel. If the measure of angle numbered 2 is 60° , what is the measure of angle numbered 5?

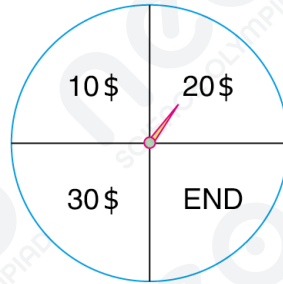


- A) 120
- B) 110
- C) 90
- D) 60

Find the value of x , if $\left(\frac{1}{8}\right)^4 = 2^{x-3}$

- A) -15
- B) -9
- C) -6
- D) 6

You spin a wheel and it randomly lands on 10\$, 20\$, 30\$ or END. If you land on 10\$, 20\$ or 30\$ you get that money and spin the wheel again. You keep continuing until you land on END. What is the probability that the game ends with you have won exactly 40\$?



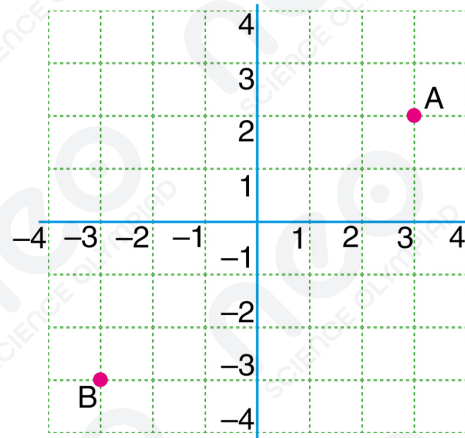
- A) $37/512$ B) $61/1024$ C) $5/64$ D) $35/512$



What is the volume of the rectangular prism in cm^3 ?

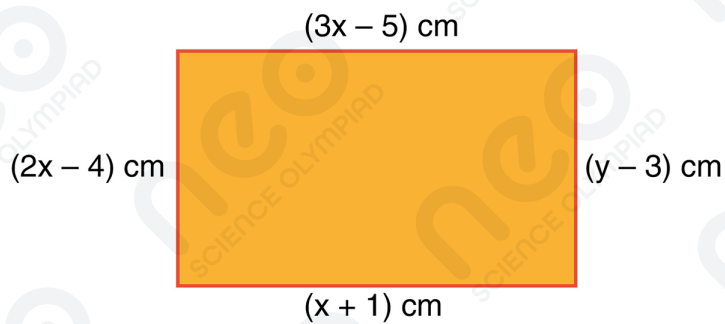
- A) 3^{20} B) 3^{18} C) 3^{15} D) 3^{12}

Find the coordinates of A and B.



- A) (2,3) and (-3,-3)
- B) (3,2) and (2,-3)
- C) (-3,2) and (3,2)
- D) (3,2) and (-3,-3)

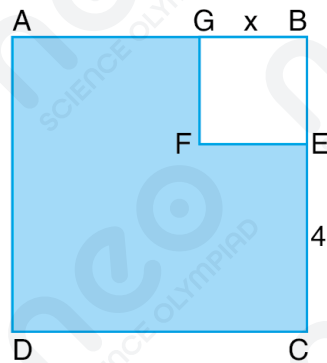
Find the product of x and y.



- A) 3
- B) 5
- C) 15
- D) 30

Find the slope of the line $3x-4y+12=0$.

- A) 4 B) 3 C) $\frac{3}{4}$ D) $\frac{4}{3}$



ABCD and BEFG are squares.

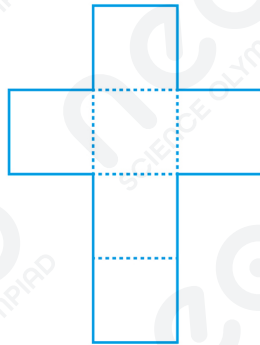
$|GB| = x$ cm and $|EC| = 4$ cm

Find the area of the shaded part in the figure given above in cm^2 .

- A) $8x + 16$ B) $2x + 8$
C) $x + 4$ D) $x^2 - 18$

Find the value of $\frac{5}{a^2 + a + 1} - a$ if $a^3 = 6$

- A) 3 B) 1 C) -5 D) -1



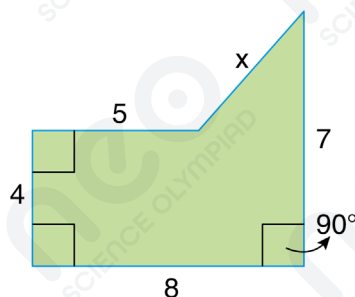
Which solid figure would this net make?

- A) Cube
- B) Cone
- C) Cuboid
- D) Pyramid

Elsa has a rectangular toy with an area of 150 cm^2 and a perimeter of 50 cm . What is the shorter side of the toy?

- A) 6 cm
- B) 8 cm
- C) 10 cm
- D) 15 cm

Find the value of x .



- A) $3\sqrt{2}$
- B) 4
- C) $4\sqrt{2}$
- D) 5



Leonard needs to rent a tent. Suppose Company A charges a rate of \$40 per a day and Company B charges an extra \$80 service fee plus \$20 per a day. In how many days will the costs be the same for both of the companies?

- A) 1 B) 2 C) 3 D) 4
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A company divided its partners into groups of 2 people. Each group consisting of 2 people wrote a report that had 4 pictures in it. The partners used 60 pictures altogether. How many partners were there in total?

- A) 40
B) 30
C) 100
D) 32
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Luna is 7 years older than her cousin Elena. Sum of their ages is 43. Calculate the ages of Luna and Elena.

- A) Luna is 18 years old and Elena is 25 years old.
B) Luna is 25 years old and Elena is 18 years old.
C) Luna is 17 years old and Elena is 26 years old.
D) Luna is 26 years old and Elena is 17 years old.
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Harry is traveling from Vienna to Rome with his electric car. The battery of the vehicle is fully charged in 30 minutes and it can travel 320 km in total with a full battery. Considering that Harry is traveling at a constant speed of 120 km per hour, how soon can he complete the journey from Vienna to Rome, which is 1,120 km in total? (The vehicle's battery is 50% charged at the start.)



- A) 8 hours 50 minutes
- B) 9 hours 20 minutes
- C) 9 hours 40 minutes
- D) 10 hours 50 minutes