



MINISTRY OF  
EDUCATION AND CULTURE

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SAMOA NATIONAL ASSESSMENT OF PRIMARY EDUCATION

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2025

SNAPE YEAR 8

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MATHEMATICS

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TIME: 2 HOURS

**INSTRUCTIONS:**

1. Check that you have a separate Answer Sheet.
2. Check all your information on the Answer Sheet is correct.
3. Use the Answer Sheet for **ALL ANSWERS**. Read each question carefully before using the Answer Sheet to mark your response (A, B, C or D).
4. Completely shade the circle like this: ● and **NOT** like this: ⊗ ⊘ ⊙ ⊚
5. **DO NOT** WRITE ANSWERS IN THIS BOOKLET.
6. This paper has 60 Multiple Choice questions.

MATHEMATICS CURRICULUM		PAGE	Number of Questions
STRAND 1	NUMBERS AND OPERATIONS	2 – 7	21
STRAND 2	PATTERNS AND ALGEBRA	8 – 12	14
STRAND 3	DATA ANALYSIS	13 – 16	8
STRAND 4	MEASUREMENTS	17 – 18	6
STRAND 5	SPACE AND GEOMETRY	19 – 23	11
TOTAL			60

**CHECK!** That this booklet contains pages 2 - 23 in the right order.

**AT THE END OF THE EXAMINATION GIVE THIS BOOKLET AND ANSWER SHEET TO THE SUPERVISOR**

**DO NOT WRITE ANSWERS IN THIS BOOKLET. USE THE ANSWER SHEET.**

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**STRAND 1: NUMBERS AND OPERATIONS**

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1. The cube root of 8 can be represented algebraically as:  $\sqrt[3]{8} = \sqrt[3]{\square^3}$ .  
What is the missing value?  
  
A. 32  
B. 3  
C. 2  
D. 4
  
2. When written as a negative exponent,  $\frac{1}{100}$  is :  
  
A.  $10^{-2}$   
B.  $100^{-2}$   
C.  $1^{-100}$   
D.  $50^{-2}$
  
3. Which of the following is the smallest number that is divisible by 3?  
  
A. 1000  
B. 1001  
C. 1002  
D. 1005
  
4. What is the Lowest Common Multiple (LCM) of 3, 10, and 15?  
  
A. 15  
B. 30  
C. 60  
D. 90
  
5. How many factors does 60 have?  
  
A. 24  
B. 10  
C. 12  
D. 6

6. Which of the following shows the expanded form of the number 4,052?
- A.  $400 + 50 + 2$
  - B.  $4,000 + 50 + 2$
  - C.  $4,000 + 500 + 2$
  - D.  $4,000 + 52$
7. The sum of 1580 and 395 is:
- A. 1875
  - B. 1865
  - C. 1955
  - D. 1975
8. At 2am in Auckland New Zealand, the temperature was measured to be  $-3^{\circ}\text{C}$ . If the temperature rises at a constant rate of  $2^{\circ}\text{C}$  each hour, calculate the expected temperature at 9am.
- A.  $8^{\circ}\text{C}$
  - B.  $11^{\circ}\text{C}$
  - C.  $14^{\circ}\text{C}$
  - D.  $5^{\circ}\text{C}$
9. A local store bought 300 dolls for \$1,800. They spent \$120 on shipping. How much should they sell each doll to get a profit of \$240?
- A. \$6.40
  - B. \$7.20
  - C. \$7.60
  - D. \$8.00
10. What is the sum of the product of  $-3$  and  $-7$ , and the product of  $-5$  and  $4$ ?
- A.  $-41$
  - B.  $1$
  - C.  $-11$
  - D.  $-1$

11. Calculate the value of the following expression:

$$10 - (-5) \times 3$$

- A. -5
- B. 45
- C. -25
- D. 25

12. Evaluate:  $4\frac{7}{8} \div 2\frac{4}{8}$

- A.  $\frac{20}{39}$
- B.  $1\frac{19}{20}$
- C.  $2\frac{7}{4}$
- D.  $\frac{19}{20}$

13. Simplify:  $\frac{53.7}{1.9 + 2.7}$

- A. 10.5
- B. 11.7
- C. 12.3
- D. 13.8

14. The average heart beats 72 times in 60 seconds. How many times does it beat in 32 seconds?

- A. 38.4
- B. 42.0
- C. 45.6
- D. 2.25

15. Twenty-five percent of what number is equal to 64?
- A. 128
  - B. 192
  - C. 256
  - D. 320

**Use the information below to answer Questions 16 and 17.**

Josie places \$450 in a fixed deposit account that pays interest at the rate of  $4\frac{1}{2}\%$  per year compounded quarterly.

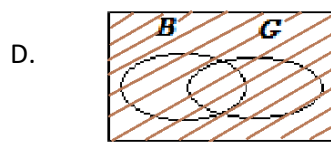
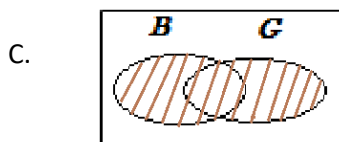
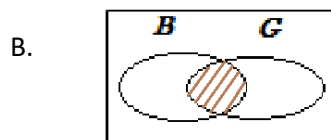
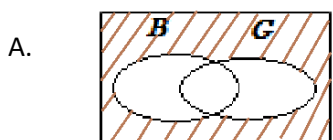
The table below shows the compound interest for the four (4) quarters of the first year.

	Compound Interest	Balance
<b>FIRST YEAR</b>		<b>\$450.00</b>
First quarter		\$455.06
Second quarter	\$5.12	\$460.18
Third quarter	\$5.18	\$465.36
Fourth quarter		

16. What is the compound interest after the first quarter?
- A. \$4.50
  - B. \$5.06
  - C. \$5.12
  - D. \$5.18
17. What is the final balance at the end of the fourth quarter?
- A. \$689.30
  - B. \$475.80
  - C. \$455.06
  - D. \$470.60

18. Orange juice is sold in 4 different packs. Which of the following represents the best buy?
- A. 300mL for 96 sene
  - B. 750mL for \$1.90
  - C. 1L for \$2.60
  - D. 1.5L for \$3.96

19. Which of the following Venn Diagram illustrates the relationship between picking a "Blue(B) OR Green(G)" marble.

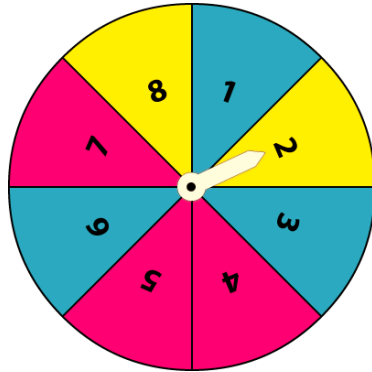


20. A bag contains two yellow, three black, five red, five blue, two green, and four white marbles. A student is asked to draw one marble out. What is the probability that it is a blue marble?

- A.  $\frac{1}{6}$
- B.  $\frac{5}{21}$
- C.  $\frac{5}{20}$
- D.  $\frac{1}{4}$



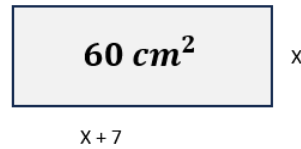
21. The spinner shown below is equally likely to stop on each of the sectors numbered 1 to 8. What is the probability that the spinner will stop on a prime number?



- A.  $1/8$
- B.  $3/8$
- C.  $4/8$
- D.  $5/8$

22. A rectangle has a width (W) of 'X' cm. Its length (L) is 7 cm more than its width. If the area of the rectangle is  $60 \text{ cm}^2$ , what are the length and width?

- A. W=7cm, L=10cm
- B. W=5cm, L=12cm
- C. W=5cm, L=14cm
- D. W=7cm, L=6cm



23. A number is tripled and then 5 is subtracted. The result is 13. What is the number?

- A. 18
- B. 6
- C. 3
- D. 13

24. Solve the following equation:

$$\frac{1}{4}(x - 8) = -3$$

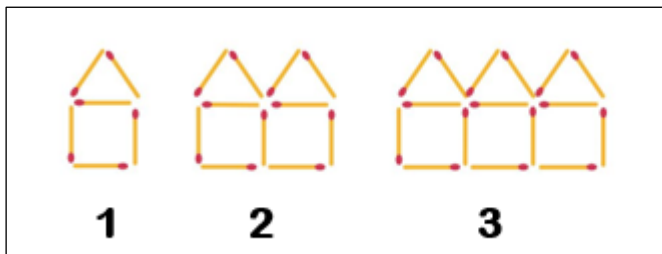
- A. 4
- B. 1
- C. -20
- D. -4

25. Simplify the following expression:

$$35t^2 - 3t \times 5t$$

- A.  $20t^2$
- B.  $32t^2$
- C.  $15t^2$
- D.  $20t$

Use the diagram and table below to answer Questions 26 and 27.



The pattern is represented in the table below.

Pattern	1	2	3	4
Number of matchstick ( $y$ )	6	$Y_1$	$Y_2$	$Y_3$

26. Which set of numbers are the unknown  $y$  values that complete the above table?

- A. 8, 10, 12
- B. 11, 16, 21
- C. 9, 12, 15
- D. 7, 8, 9

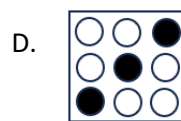
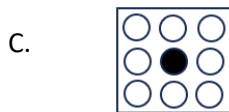
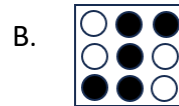
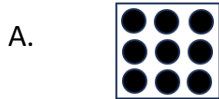
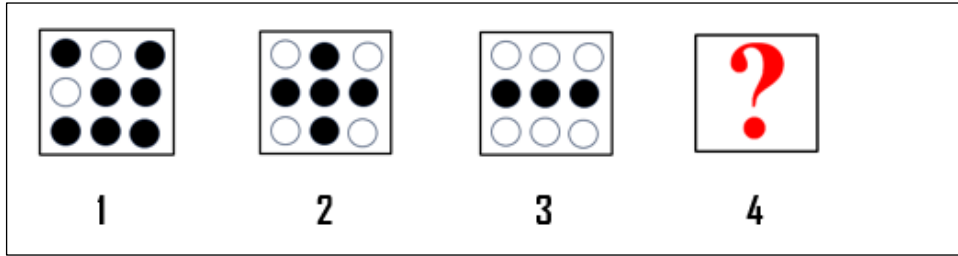
27. Which of the following best describes the pattern above?

- A. increases by 5 matchsticks
- B. increases by 2 matchsticks
- C. decreases by 1 matchstick
- D. decreases by 2 matchsticks

28. Factorise:  $xy - xz$

- A.  $x(y - z)$
- B.  $y(x - z)$
- C.  $z(y - x)$
- D.  $x(y + z)$

29. Which shape comes next in the sequence?



30. Consider the pattern:

$$6^2 - 5^2 = 6 + 5 = 11$$

$$7^2 - 6^2 = 7 + 6 = 13$$

$$8^2 - 7^2 = 8 + 7 = 15$$

Following the same pattern, what are the possible values to complete:

$$51^2 - 50^2 = \_ + \_ = \_$$

A.  $51 + 49 = 100$

B.  $50 + 49 = 99$

C.  $51 + 50 = 101$

D.  $52 + 50 = 102$

Use the table given below to answer Question 31.

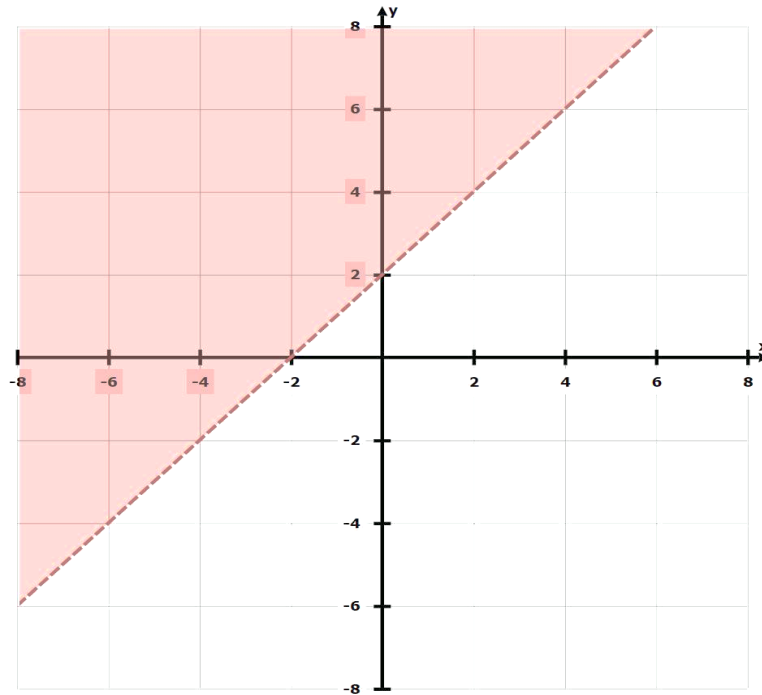
$x$	-4	-2	0	2	4
$-2x + 1$	9	5	1	?	?

31. Which of the following set of numbers best complete the table in the correct order?

- A.  $-3, -7$
- B.  $-5, -9$
- C.  $3, 7$
- D.  $5, 9$

32. Which inequality correctly describes the shaded area as shown on this graph?

- A.  $y \geq x + 2$
- B.  $y < x + 2$
- C.  $y > -x + 2$
- D.  $y > x + 2$



Use the information below to answer Questions 33 and 34.

Jacob works part-time at a café. He earns \$10 per hour and wants to earn at least \$200 this week.

33. Which inequality represents the number of hours Jacob needs to work to earn at least \$200? [let  $x$  represents the number of hours he works]

- A.  $10x \leq 200$
- B.  $10x \geq 200$
- C.  $x + 10 \geq 200$
- D.  $\frac{x}{10} \geq 200$

34. Work out how many hours Jacob needs to work to earn at least \$200.

- A. At least 15 hours
- B. At least 20 hours
- C. At least 25 hours
- D. At least 30 hours

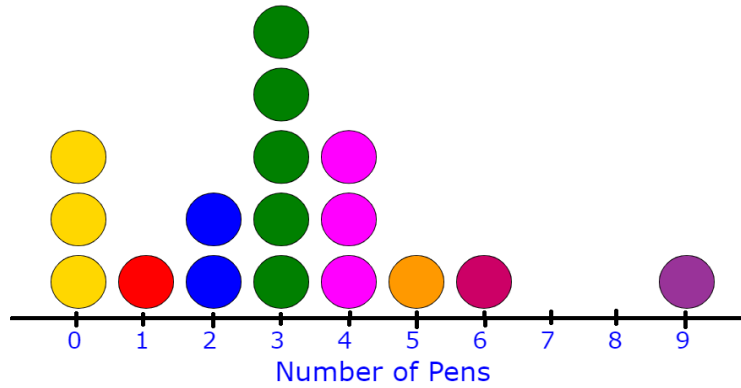
35. Solve the following linear equation.

$$2 - 5x \geq 17$$

- A.  $x \leq -3$
- B.  $x \geq -3$
- C.  $x \leq 3$
- D.  $x \geq 3$

Use the Dot plot to answer Questions 36 and 37.

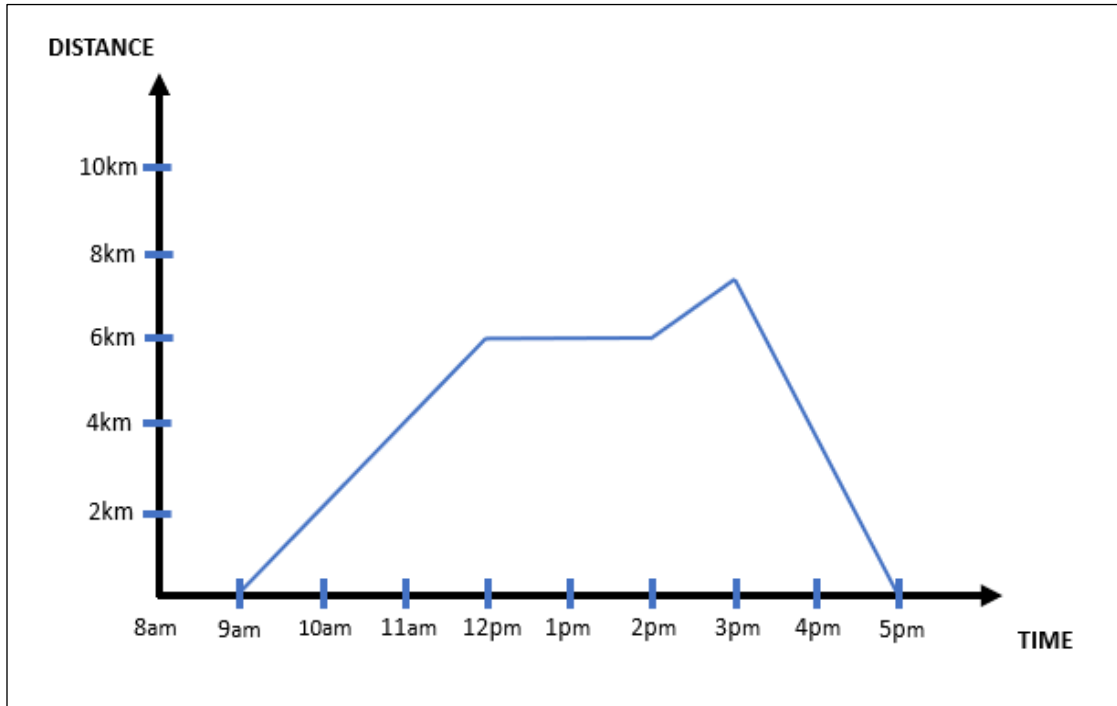
The Dot plot below shows the number of pens a student has in Miss Jayda's class.



36. How many students are in Miss Jayda's class?
- A. 9
  - B. 17
  - C. 5
  - D. 18
37. How many students have less than 3 pens?
- A. 2
  - B. 11
  - C. 6
  - D. 3

Use the Distance -Time graph below to answer Questions 38 and 39.

The graph shows Joshua's journey, leaving his home at 9am till 5pm



38. How far did Joshua travel in the first 3 hours of his journey?

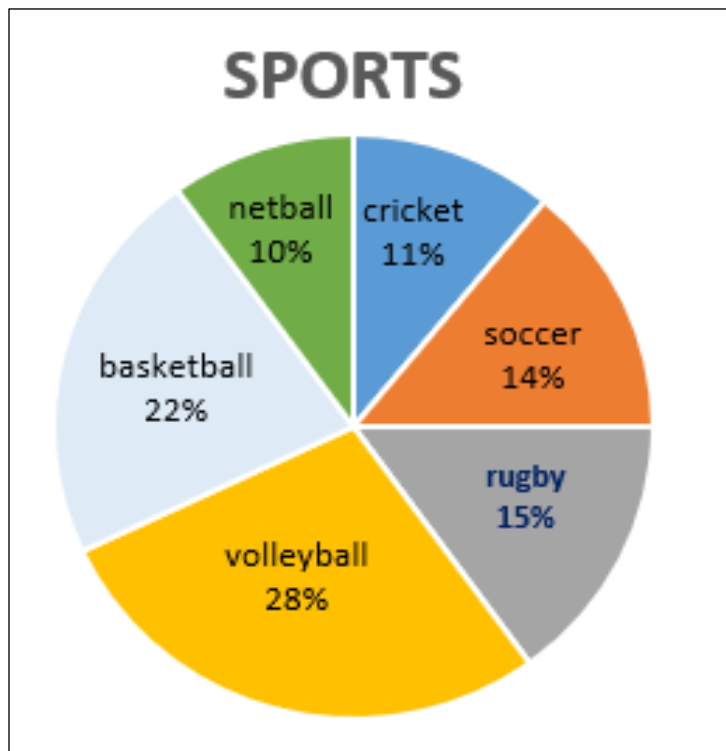
- A. 2km
- B. 4km
- C. 6km
- D. 8km

39. What do you think Joshua was doing from 12pm to 2pm?

- A. Running
- B. Returning back
- C. Resting
- D. Walking

Use the Pie Chart below to answer Questions 40 and 41.

The Pie Chart represents students' choices of sports at one of Samoa's primary schools.



40. Which three sports make up exactly 60% of the choices?

- A. Netball, volleyball, rugby
- B. Basketball, volleyball, soccer
- C. Rugby, soccer, netball
- D. Volleyball, basketball, netball

41. Which sport is the least popular?

- A. Netball
- B. Cricket
- C. Basketball
- D. Volleyball

Use the frequency table to answer Questions 42 and 43.

Twenty five students took the same test, and their scores were recorded in the Frequency Table below.

Score (x)	Tally Marks	Frequency (f)
13		2
14		4
15	 	5
16	 	8
17	 	6
<b>Total</b>		<b>25</b>

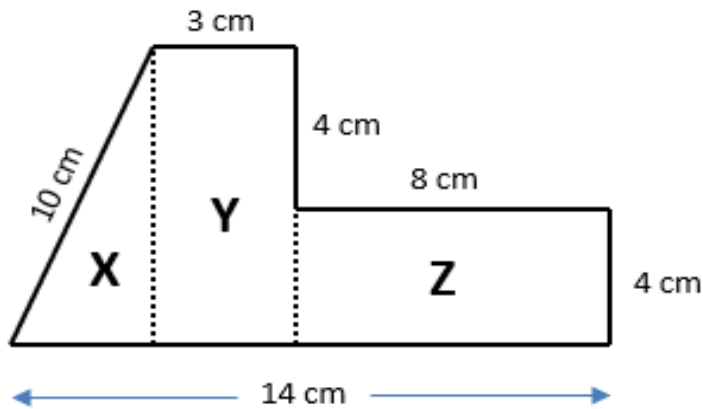
42. What is the mean score?

- A. 16
- B. 387
- C. 15.48
- D. 1.064

43. Find the median score.

- A. 12.5
- B. 16
- C. 17
- D. 13

Use the figure below to answer Questions 44 and 45.



44. What is the area for the triangle 'X' above? (Note:  $A = \frac{1}{2}bh$ )
- A.  $12 \text{ cm}^2$
  - B.  $140 \text{ cm}^2$
  - C.  $24 \text{ cm}^2$
  - D.  $15 \text{ cm}^2$
45. Find the perimeter of the above figure.
- A. 43 cm
  - B. 33 cm
  - C. 29 cm
  - D. 45 cm
46. Circle A has a circumference of 31.4cm and circle B has a radius of 3 cm. What is the difference between the circumferences of circle A and circle B? [use  $\pi = 3.14$ ]
- A. 3.14 cm
  - B. 12.56 cm
  - C. 15.14 cm
  - D. 28.4 cm

47. A cylindrical swimming pool has a diameter of 8 meters. About how high must it be filled to hold  $250 \text{ m}^3$  of water? [ *Note:  $V = \pi r^2 h$ , Use  $\pi = 3.14$* ]

- A. 3.14 meters
- B. 4.5 meters
- C. 4.98 meters
- D. 5.5 meters



**Use the information below to answer Questions 48 and 49.**

Joshua lives in New York and his grandmother lives in Samoa. The time difference is 7 hours, with New York being ahead.

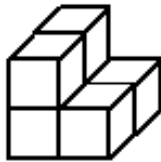
48. If it is 10.00 am in Samoa, what time is it in New York?
- A. 5.00 pm
  - B. 5.00 am
  - C. 7.00 pm
  - D. 3.00 am
49. If Joshua wants to video call his grandmother at 3.00 pm New York time, what time will it be in Samoa when he makes the call?
- A. 10.00 pm
  - B. 8.00 am
  - C. 10.00 am
  - D. 8.00 pm

50. 3D solids have three different boundaries, which are the faces, edges and vertices. Euler's formula ( $Faces + Vertices - Edges = 2$ ) gives a relationship between these boundaries.

How many vertices then of a triangular prism, given its  $faces = 5$  and  $edges = 6$  ?

- A. 3
- B. 11
- C. 10
- D. 12

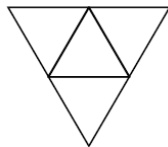
51. What is the surface area of the solid below?



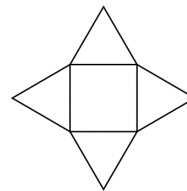
- A. 22 square units
- B. 24 square units
- C. 36 square units
- D. 6 square units

52. Which is a net of a cylinder?

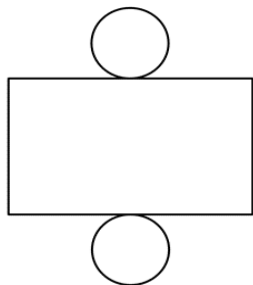
A.



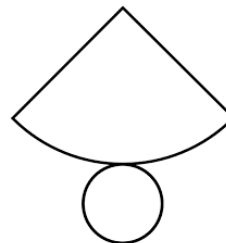
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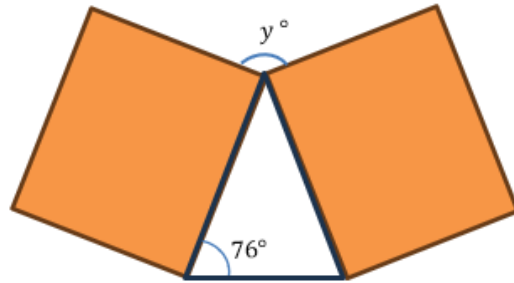
C.



D.

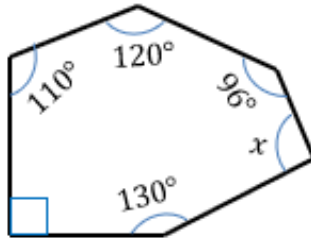


53. The diagram shows two congruent squares and an isosceles triangle.



Calculate the value of  $y$

- A.  $104^\circ$   
B.  $90^\circ$   
C.  $28^\circ$   
D.  $152^\circ$
54. Find the missing angle labeled ' $x$ ' in an irregular polygon given below:



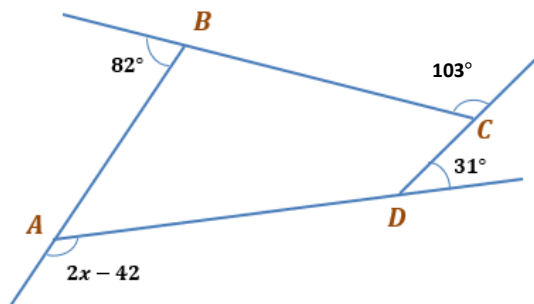
- A.  $164^\circ$   
B.  $174^\circ$   
C.  $184^\circ$   
D.  $194^\circ$

55. Two similar triangles are shown below. The ratio of the lengths of the corresponding sides AB to DE is 5 m : 8 m.



What is the length of EF?

- A. 4.2m  
 B. 5.0m  
 C. 5.6m  
 D. 6.4m
56. The sum of the exterior angles of any polygon is always  $360^\circ$ . A regular polygon has 8 sides. What is the measure of each exterior angle?
- A.  $30^\circ$   
 B.  $45^\circ$   
 C.  $60^\circ$   
 D.  $135^\circ$
57. What is the measure of angle A? (Note:  $A = 2x - 42$ )

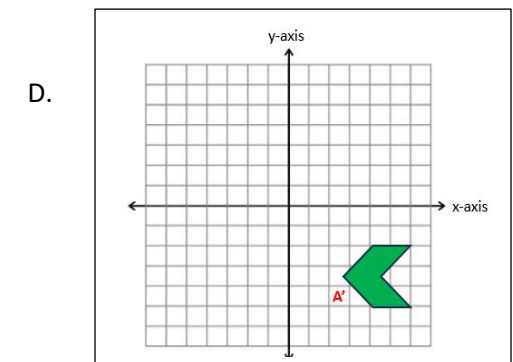
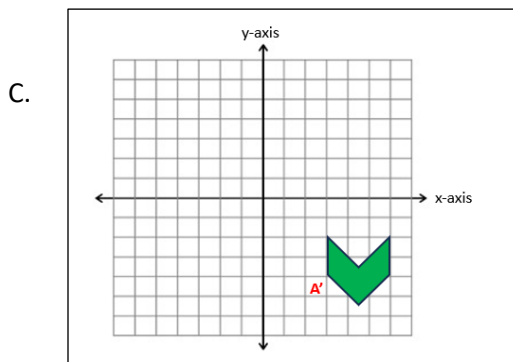
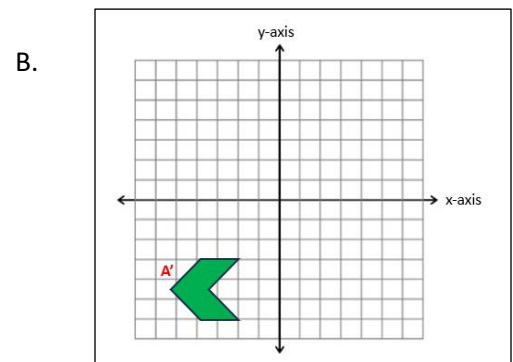
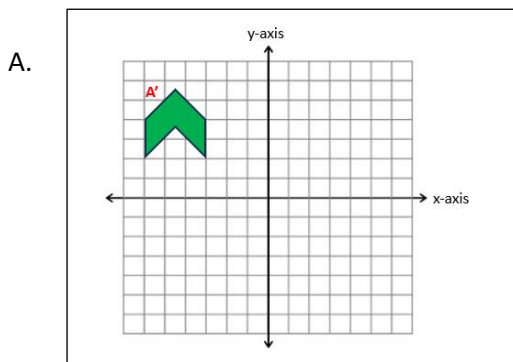
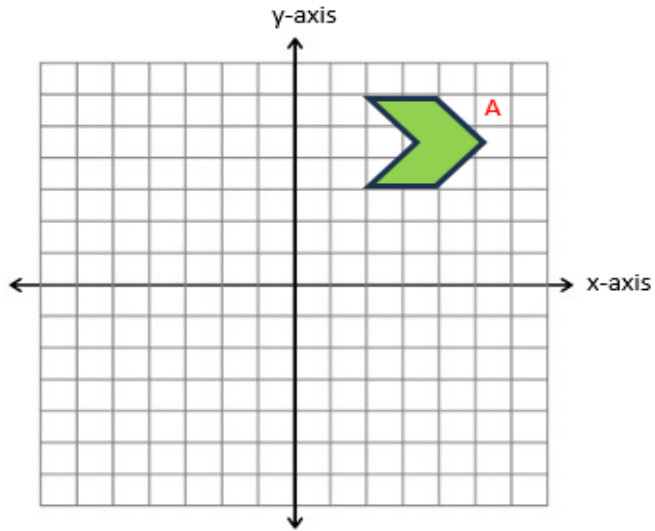


- A.  $93^\circ$   
 B.  $134^\circ$   
 C.  $144^\circ$   
 D.  $186^\circ$

58. Which of these quadrilateral shapes does not have a perpendicular diagonal?

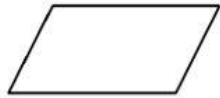
- A. Square
- B. Rectangle
- C. Kite
- D. Rhombus

59. Which of the following rotation shows the rotation of the shape A ,  $90^\circ$  anticlockwise at (0,0) origin?



60. Which of the following is a concave polygon?

A.



B.



C.



D.

