



**MATHEMATICS**

**03**

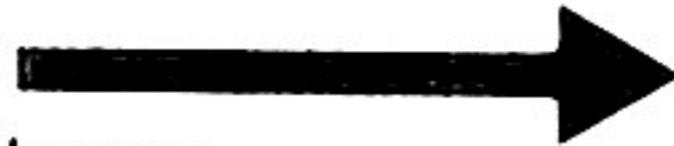

Paper 1

October 2020

Marks: 60

TIME: 90 Minutes

**INSTRUCTIONS**

- Answer all questions on the answer sheet provided.
- When you are told to begin, work as fast and as accurately as you can. If you cannot answer a question, do not spend too much time on it; go to the next question and come back to it later.
- You may do rough work on the test paper or on a sheet of blank paper. **DO NOT** use the answer sheet for rough work.
- Four possible answers are given for each question. Select the answer you think is the best and fill the oval for that answer on your answer sheet.
- Be sure to fill the ovals like this:**   
Erase completely answers that you wish to change.  
**DO NOT** make any stray marks on your answer sheet.  
If more than one oval is filled for a question it will be marked wrong.  
Be sure the oval you fill on your answer sheet is for the question you are working on in the test paper.  
**DO NOT** mark the ovals like this:   
If you do, your answers will be marked wrong.
- Sample questions are given to help you. Read them carefully before doing the questions.

**YES**

17	(A)	(B)	(C)	(D)
18	(A)	(B)	(C)	(D)
19	(A)	(B)	(C)	(D)

**NO**

1	(A)	(B)	(C)	(D)
2	(A)	(B)	(C)	(D)
3	(A)	(B)	(C)	(D)
4	(A)	(B)	(C)	(D)

**SAMPLE QUESTIONS**

1. Work out

1.1
+ 0.4

A	1.5
B	1.3
C	0.7
D	0.6

2. Work out

3.5
- 0.9

A	4.4
B	4.6
C	2.8
D	2.6

SAMPLE 1

<input type="radio"/>	(B)	(C)	(D)
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SAMPLE 2

(A)	(B)	(C)	<input type="radio"/>
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*This question paper contains 16 printed pages.*

**DO NOT TURN THE PAGE UNTIL YOU ARE TOLD TO DO SO**

1. Which of the following lists of numbers are all factors of 36?
- A 1, 2, 3, 7
  - B 1, 6, 9, 16
  - C 9, 12, 18, 36
  - D 10, 12, 18, 36
2. What is the value of  $30 + 22 \div 2 - 17$ ?
- A 52
  - B 40
  - C 36
  - D 25
3. What is the value of  $\frac{2}{3} + \frac{1}{7}$ ?
- A  $\frac{2}{21}$
  - B  $\frac{3}{21}$
  - C  $\frac{11}{21}$
  - D  $\frac{17}{21}$
4. What is the value of  $216.8 \div 4$ ?
- A 54.7
  - B 54.2
  - C 51.7
  - D 51.2
5. Write the number 2 795 in words.
- A Two hundred and seventy nine thousand and five
  - B Twenty thousand seven hundred and ninety five
  - C Two thousand seven hundred and ninety five
  - D Twenty seven thousand and ninety five
6. What is the value of  $4.8 \times 100$ ?
- A 480
  - B 48
  - C 0.48
  - D 0.048

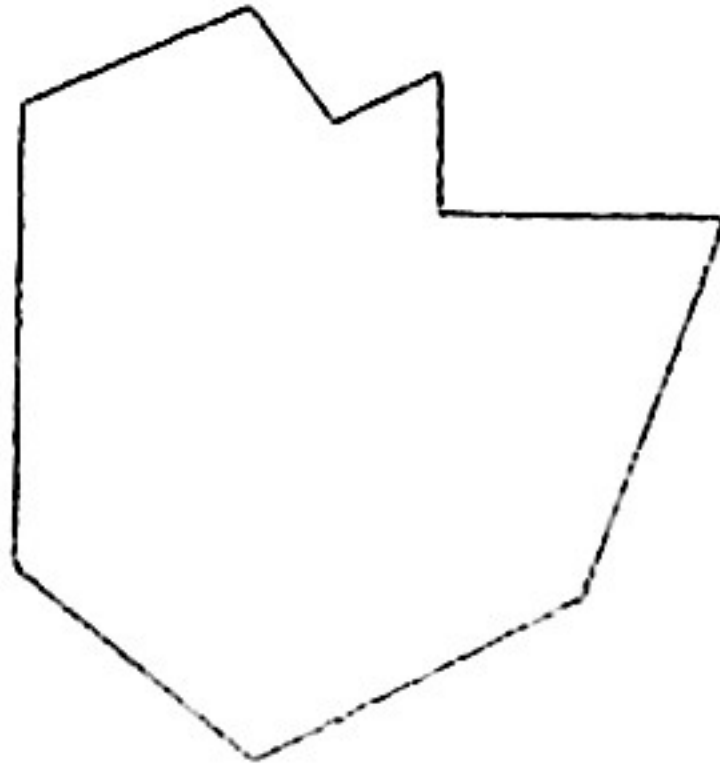
7. Express P8.05 in thebe.
- A 805 thebe
  - B 850 thebe
  - C 8 050 thebe
  - D 8 500 thebe
8. What is 1.25 l when expressed in ml?
- A 1 250 ml
  - B 125 ml
  - C 0.0125 ml
  - D 0.00125 ml
9. Which of the following events is certain to happen?
- A The sun rising next week Tuesday
  - B A fruit tree bearing onions
  - C A boy becoming pregnant
  - D A cow eating meat
10. Estimate the value of  $1\ 468 + 329$ , to the nearest hundred.
- A 1 700
  - B 1 800
  - C 1 810
  - D 2 000
11. The cost of 100 T-shirts is P3 500.  
What is the cost of 250 T-shirts?
- A P140
  - B P875
  - C P1 400
  - D P8 750
12. The median of the ordered numbers 27, 29, Y, 40, 40 and 57 is 39.  
What number is represented by the letter Y?
- A 29
  - B 30
  - C 38
  - D 40
13. Thabo has K chickens. Mogotsi has twice the number of chickens that Thabo has.  
Which of the following statements represents the number of chickens Mogotsi has?
- A  $2 - K$
  - B  $2 + K$
  - C  $2 \div K$
  - D  $2 \times K$

14. Arrange the numbers 3, -4, 5, -1, 0 in order starting with the largest.
- A -4, -1, 0, 3, 5
  - B -1, -4, 0, 3, 5
  - C 5, 3, 0, -4, -1
  - D 5, 3, 0, -1, -4
15. What is 19 45 hours when expressed in 12 hour clock notation?
- A 8.45 pm
  - B 8.15 pm
  - C 7.45 am
  - D 7.45 pm
16. Simon bought a car priced at P500 000. Value Added Tax (VAT) of 12% was charged on the price of the car. How much VAT did Simon pay for the car?
- A P 6 000
  - B P 60 000
  - C P440 000
  - D P560 000
17. A dealer bought a television set at P1 495. He later sold it and made a profit of P146.00. What was the selling price for the television set?
- A P1 641
  - B P1 631
  - C P1 541
  - D P1 349
18. In a company, tea break starts at 11 05 hours and lasts for 45 minutes. At what time does the break end?
- A 10 20 hours
  - B 10 50 hours
  - C 11 40 hours
  - D 11 50 hours
19. A rectangular tank is 9 m long, 7 m wide and 8 m high. What is the volume of the tank?
- A  $454 \text{ m}^3$
  - B  $484 \text{ m}^3$
  - C  $494 \text{ m}^3$
  - D  $504 \text{ m}^3$

20. What is  $12a - 3b + 5a$  when expressed in a simplified form?

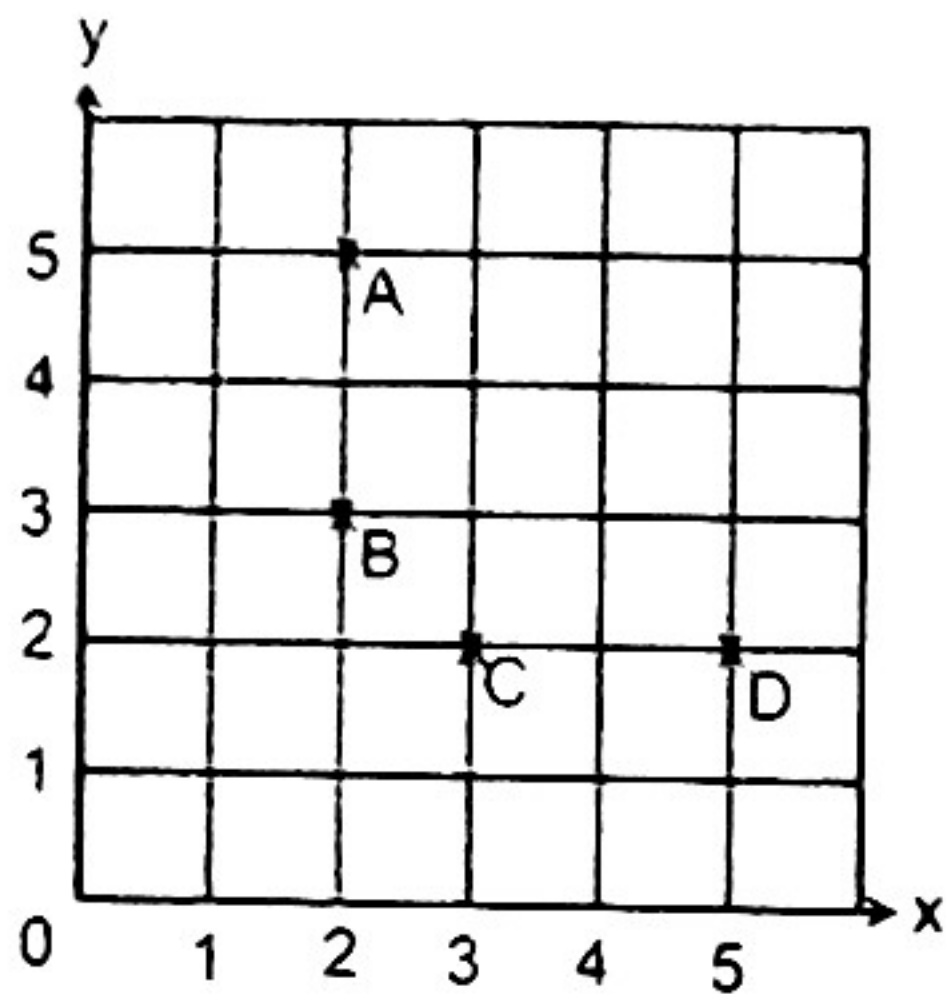
- A  $17a + 3b$
- B  $17a - 3b$
- C  $7a + 3b$
- D  $7a - 3b$

21. What is the name of the polygon drawn below?



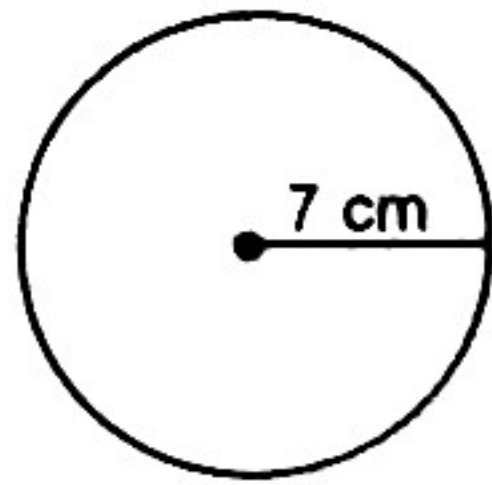
- A Decagon
- B Nonagon
- C Octagon
- D Heptagon

22. Which point on the grid below has coordinates (2, 5)?



23. Calculate the area of the circle below.

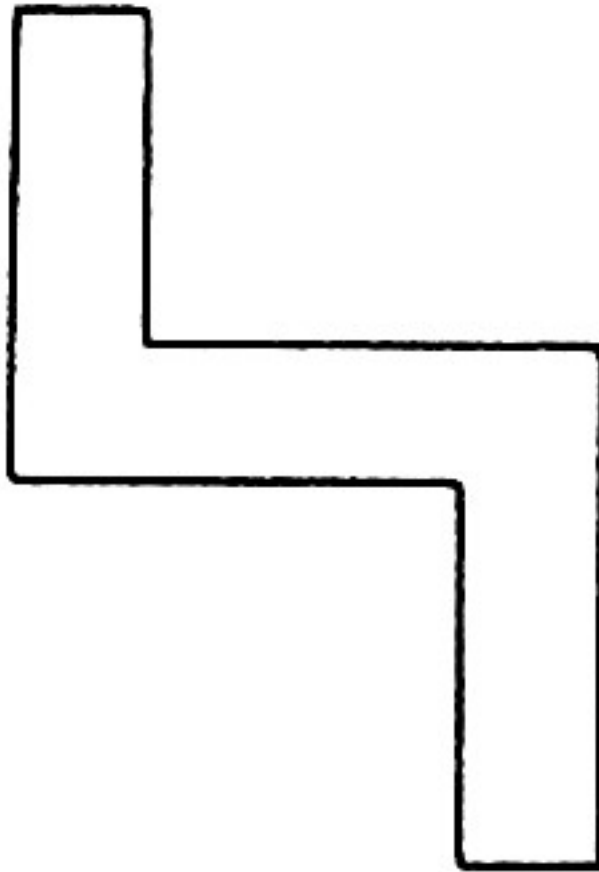
(Use  $\pi$  as  $\frac{22}{7}$ )



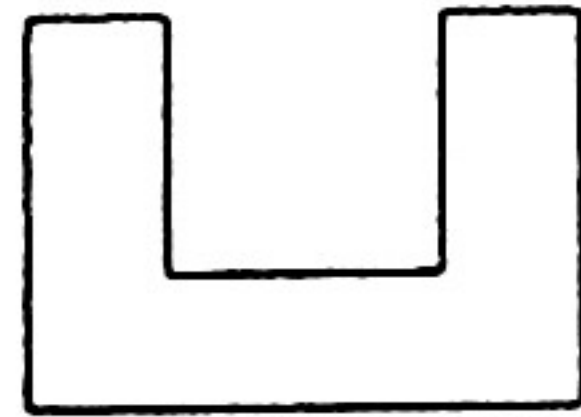
- A 44 cm<sup>2</sup>
- B 144 cm<sup>2</sup>
- C 154 cm<sup>2</sup>
- D 308 cm<sup>2</sup>

24. Which of the following shapes has a line of symmetry?

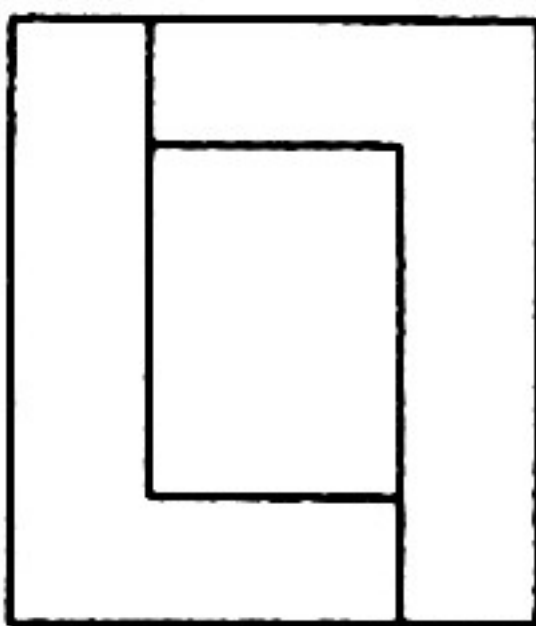
A



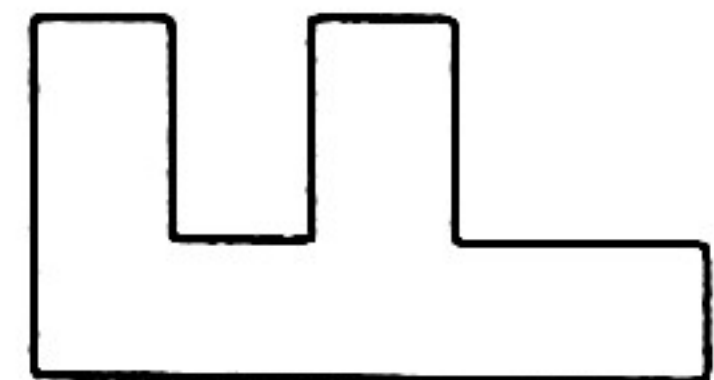
B



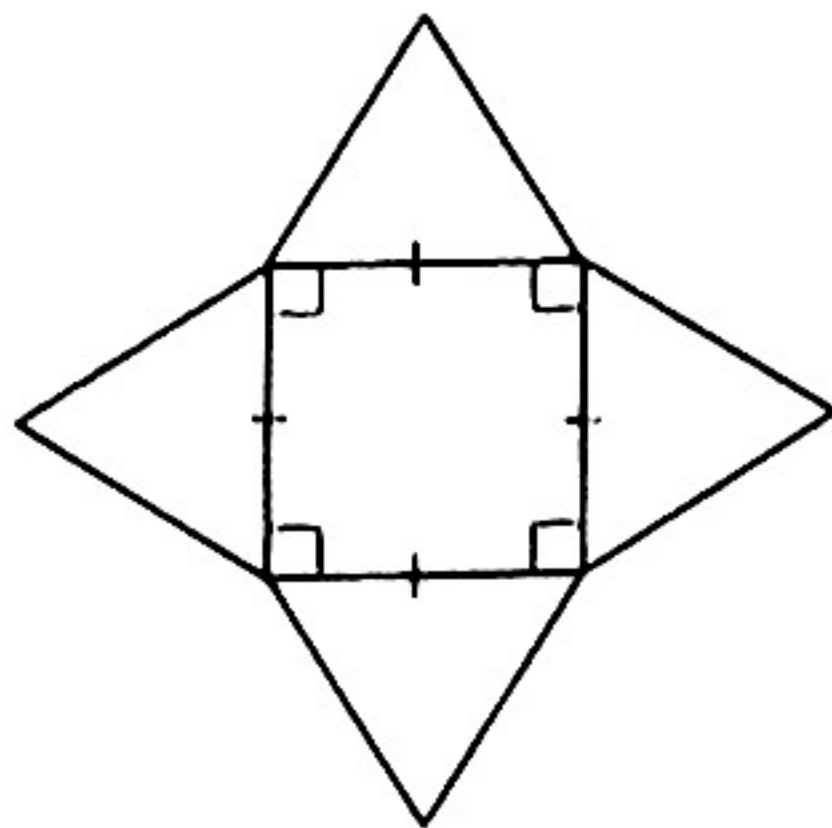
C



D



25. What is the name of a solid that can be made from the net below?

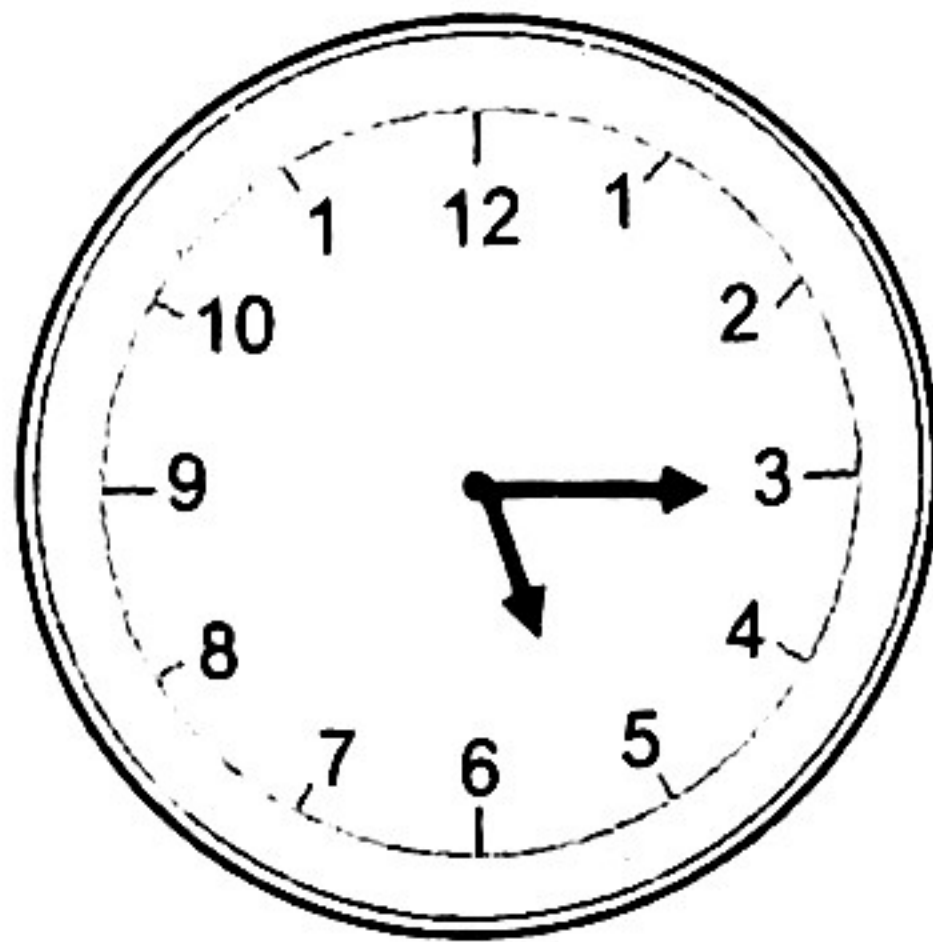


- A Triangular pyramid  
B Rectangular prism  
C Triangular prism  
D Square pyramid
26. A box contains 5 green pencils and 3 red pencils. The pencils are of the same size and shape. A pencil is selected from the box without looking. What is the probability of selecting a red pencil?
- A  $\frac{1}{3}$   
B  $\frac{3}{8}$   
C  $\frac{3}{5}$   
D  $\frac{5}{8}$
27. Which of the following is not a quadrilateral?
- A Kite  
B Pentagon  
C Rhombus  
D Trapezium
28. A garage sells 18 cars and 3 buses. What is the ratio of cars to buses in its simplest form?
- A 1 : 6  
B 1 : 2  
C 6 : 1  
D 2 : 1

29. What is the lowest common multiple of 12 and 20?

- A 60
- B 40
- C 36
- D 24

30. The clock below shows time in the afternoon.



What is the time shown on the clock?

- A 03 25 hours
  - B 05 15 hours
  - C 15 25 hours
  - D 17 15 hours
31. Which of the following years is **not** a leap year?
- A 1990
  - B 1992
  - C 1996
  - D 2000
32. Which of the following expressions has the same value as  $(10 + 5) + 8$ ?
- A  $10 + (5 + 8)$
  - B  $10 + (5 \times 8)$
  - C  $(10 \times 8) + (5 \times 8)$
  - D  $10(5 + 8) + 10(5 + 8)$
33. What is 63% when expressed as a decimal?
- A 63.0
  - B 6.3
  - C 0.63
  - D 0.063

34. What is the circumference of a circle with radius 6 cm?  
(Use  $\pi$  as 3.14)
- A 36.68 cm  
B 37.28 cm  
C 37.68 cm  
D 113.04 cm
35. What is the value of  $7\ 389 \div 35$ ?
- A  $202\frac{19}{35}$   
B  $210\frac{9}{35}$   
C  $210\frac{29}{35}$   
D  $211\frac{4}{35}$
36. A frog climbs a tree which is 20 m high.  
The frog climbs 5 m upwards, but slides 4 m downwards in a day.  
How many days will the frog take to reach the top of the tree?
- A 20 days  
B 19 days  
C 17 days  
D 16 days
37. The sum of three consecutive odd numbers is 21.  
What is the third number of the three odd numbers?
- A 3  
B 5  
C 7  
D 9
38. A ball costs P236.00  
How much will 4 such balls cost?
- A P944  
B P924  
C P844  
D P824

18

183



39. Order the fractions  $\frac{1}{2}$ ,  $\frac{3}{8}$ ,  $\frac{4}{5}$  and  $\frac{1}{4}$  starting with the largest.

A  $\frac{1}{4}$ ,  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{4}{5}$

B  $\frac{4}{5}$ ,  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{1}{4}$

C  $\frac{4}{5}$ ,  $\frac{1}{2}$ ,  $\frac{3}{8}$ ,  $\frac{1}{4}$

D  $\frac{3}{8}$ ,  $\frac{4}{5}$ ,  $\frac{1}{4}$ ,  $\frac{1}{2}$

40. How many years are there in  $4\frac{1}{2}$  centuries?

A 0.45

B 4.5

C 45

D 450

41. When the time in Botswana is 07 55 hours, the time in Angola is 06 55 hours on the same day.

What is the time difference between Botswana and Angola?

A 14 hours 50 minutes

B 11 hours

C 2 hours

D 1 hour

42. Which of the following fractions is equivalent to  $\frac{12}{40}$ ?

A  $\frac{3}{10}$

B  $\frac{6}{15}$

C  $\frac{15}{35}$

D  $\frac{18}{36}$

43. Kaone had 200 goats.  
He lost 20 goats during a storm.  
Calculate the percentage decrease in the number of Kaone's goats.

- A 10%
- B 20%
- C 80%
- D 90%

44. Which of the following statements is **not** true?

- A  $729\ 812 > 724\ 249$
- B  $340\ 418 > 541\ 881$
- C  $89\ 532 < 98\ 753$
- D  $20\ 178 < 38\ 872$

45. What is the range of the numbers below?

12, 20, 12, 15, 13

- A 14
- B 13
- C 12
- D 8

Use the key below to answer question 46.

KEY:  = 60 babies       = 25 babies

46. How many babies does the pictograph below represent?



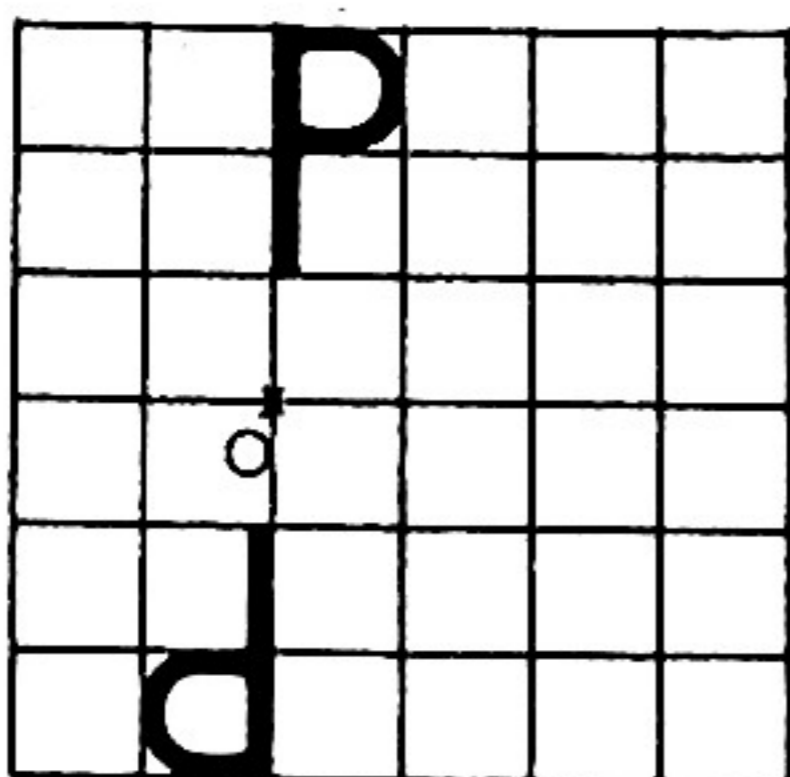
- A 240
- B 205
- C 135
- D 100

47. Thuto bought a bag of mealie-meal for P56.95 and some eggs for P35.95.  
He paid with a P100 note.  
How much was his change?

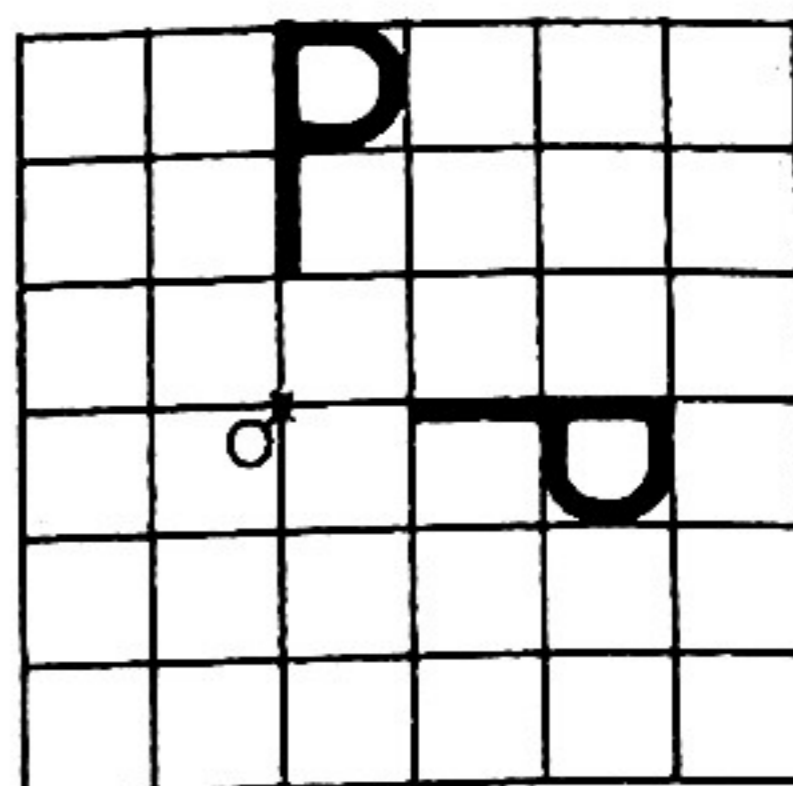
- A P17.10
- B P8.10
- C P7.20
- D P7.10

48. Which of the diagrams below shows rotation of  $90^\circ$  clockwise about point O?

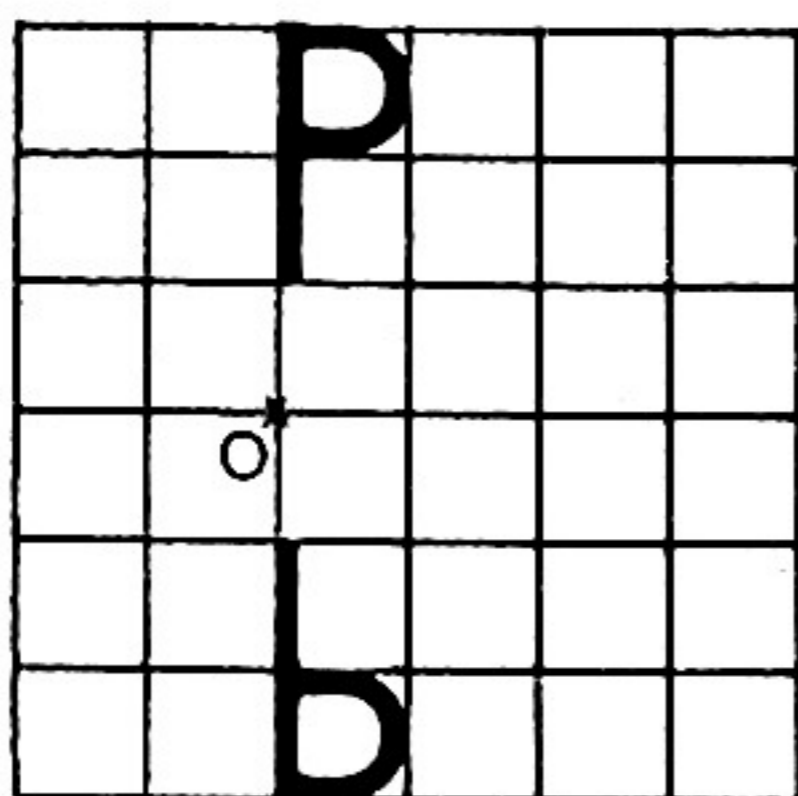
A



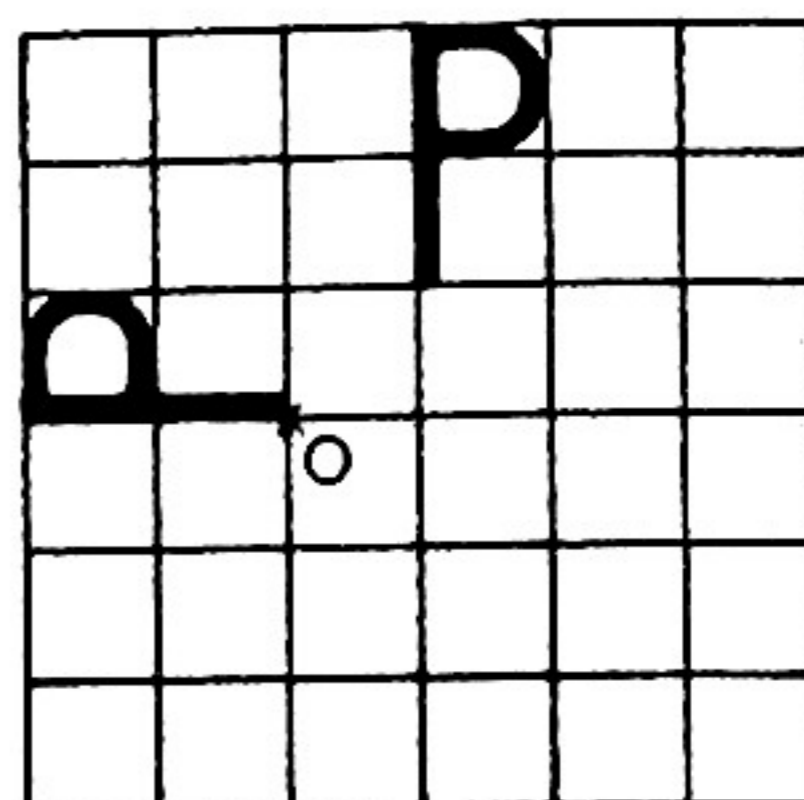
B



C



D



49. A sequence is given as 2, 5, 8, 11, ...  
What is the next number in the sequence?

- A 14
- B 17
- C 19
- D 26

50. Lorato receives  $P$  cup cakes from her mother.  
She gives Tshego 4 cup cakes and remains with 8.  
How many cup cakes did Lorato receive?

- A 32
- B 12
- C 4
- D 2

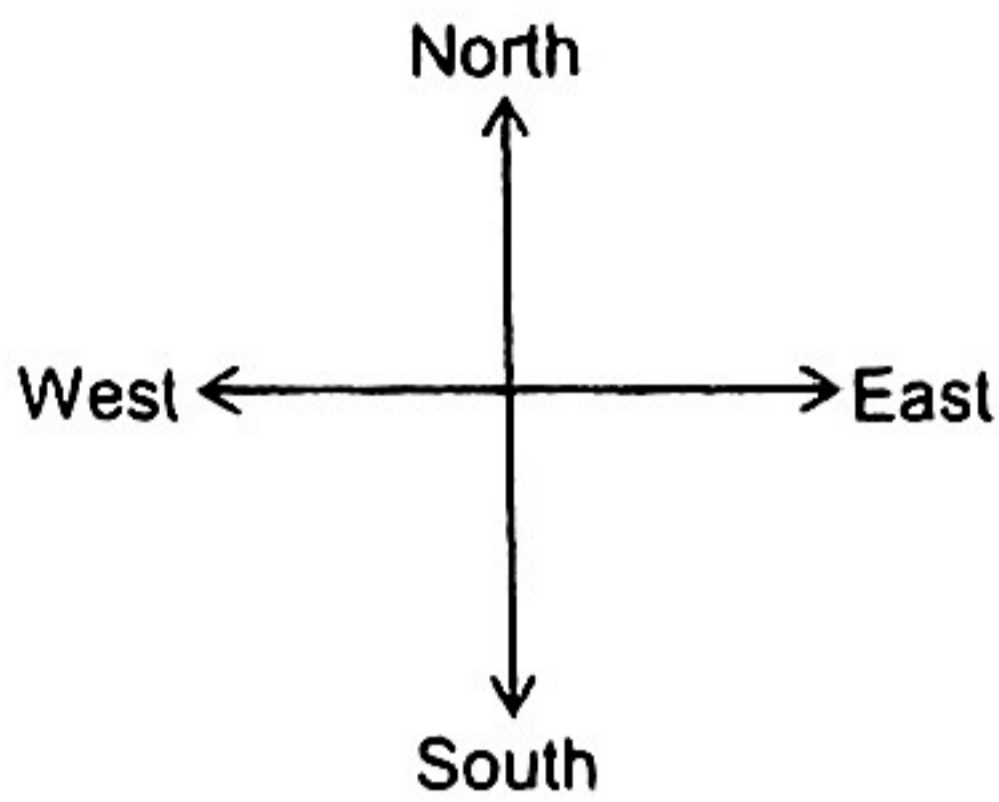
51. What is the value of  $3a - 2b$  given that  $a = 7$  and  $b = 5$ ?

- A 1
- B 3
- C 11
- D 31

52. What is 343 when expressed as a power of 7?

- A  $7^3$
- B  $7^4$
- C  $7^5$
- D  $7^6$

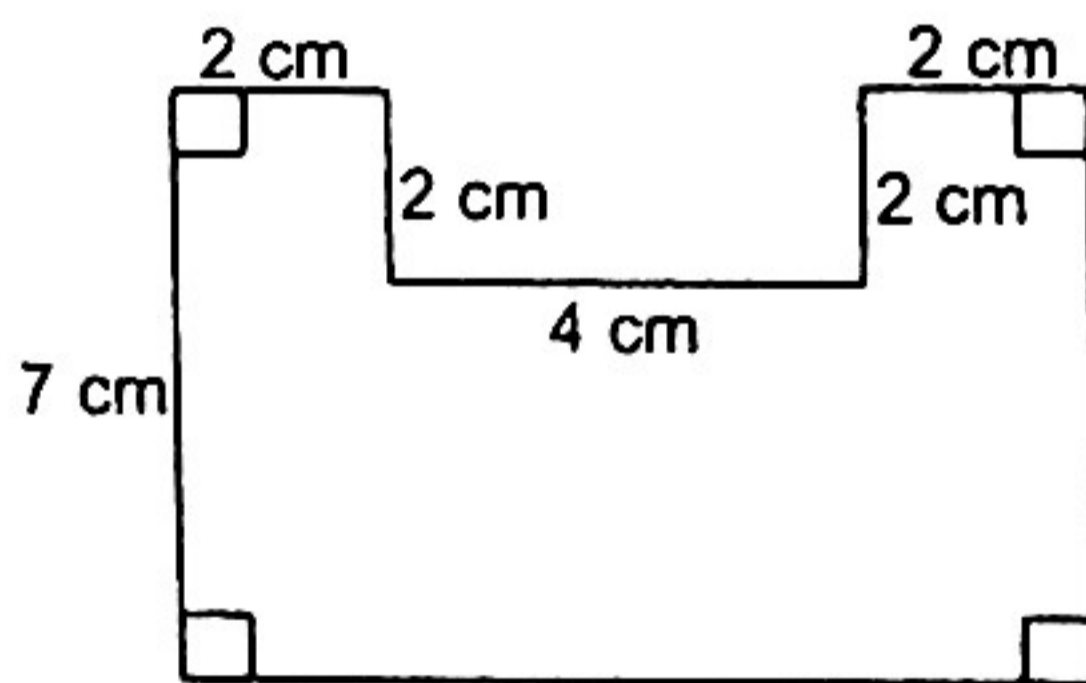
53. The diagram below shows the 4 cardinal points.



Mary is facing East, she turns anti-clockwise to face South.  
What is the size of the angle that she turned through?

- A  $360^\circ$
- B  $270^\circ$
- C  $180^\circ$
- D  $90^\circ$

54. What is the perimeter of the figure shown below?



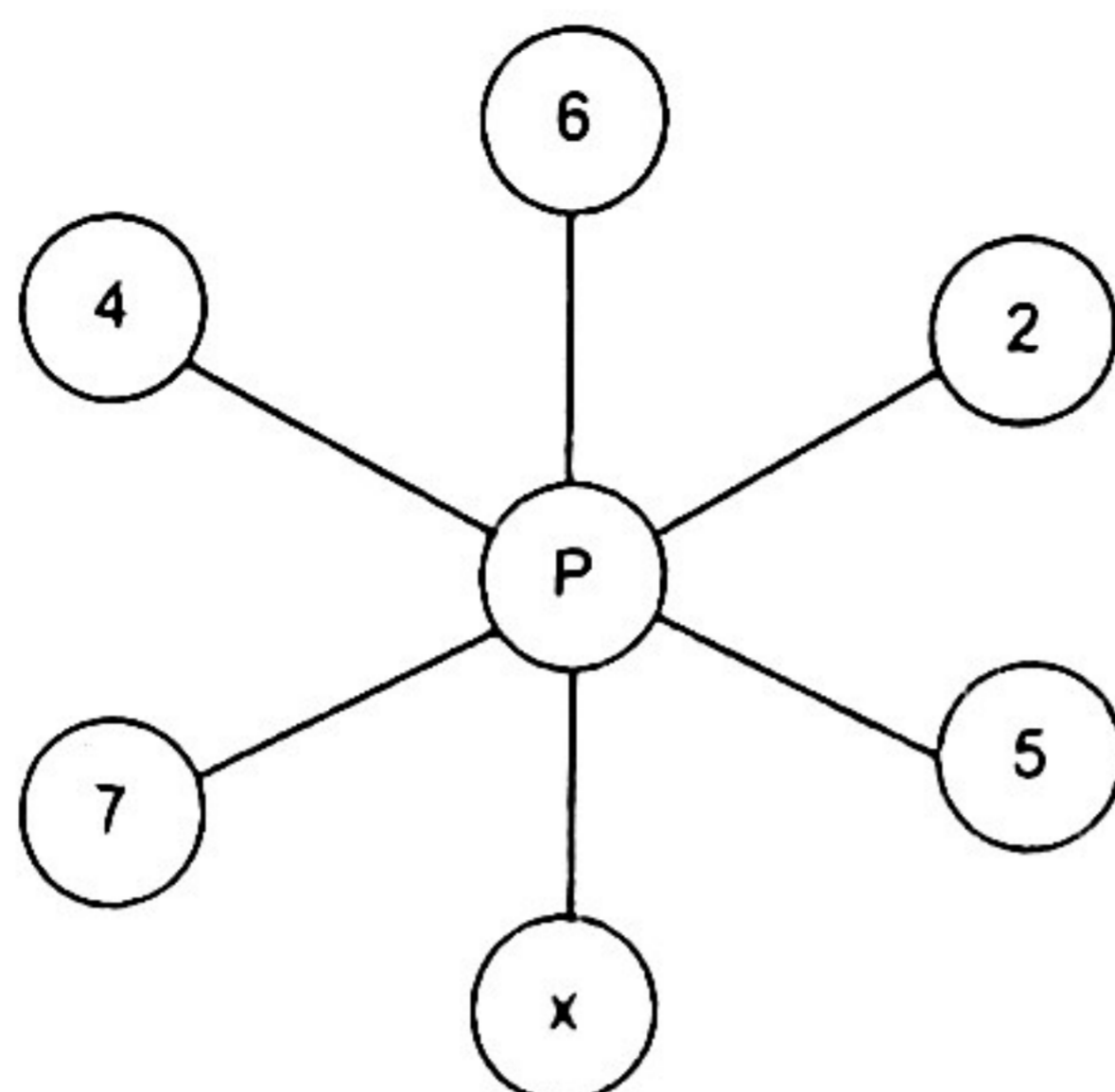
- A 30 cm
- B 34 cm
- C 38 cm
- D 48 cm

55. Which type of an angle is shown below?



- A Acute
  - B Right
  - C Obtuse
  - D Reflex
56. An empty lorry has a mass of 2 185 kg.  
Its mass is 2 553 kg when loaded with bricks.  
What is the mass of the bricks?
- A 368 kg
  - B 378 kg
  - C 468 kg
  - D 478 kg
57. A car travels a distance of 110 km in 2 hours.  
What is the speed of the car?
- A  $\frac{2}{110}$  km/h
  - B 50 km/h
  - C 55 km/h
  - D 220 km/h

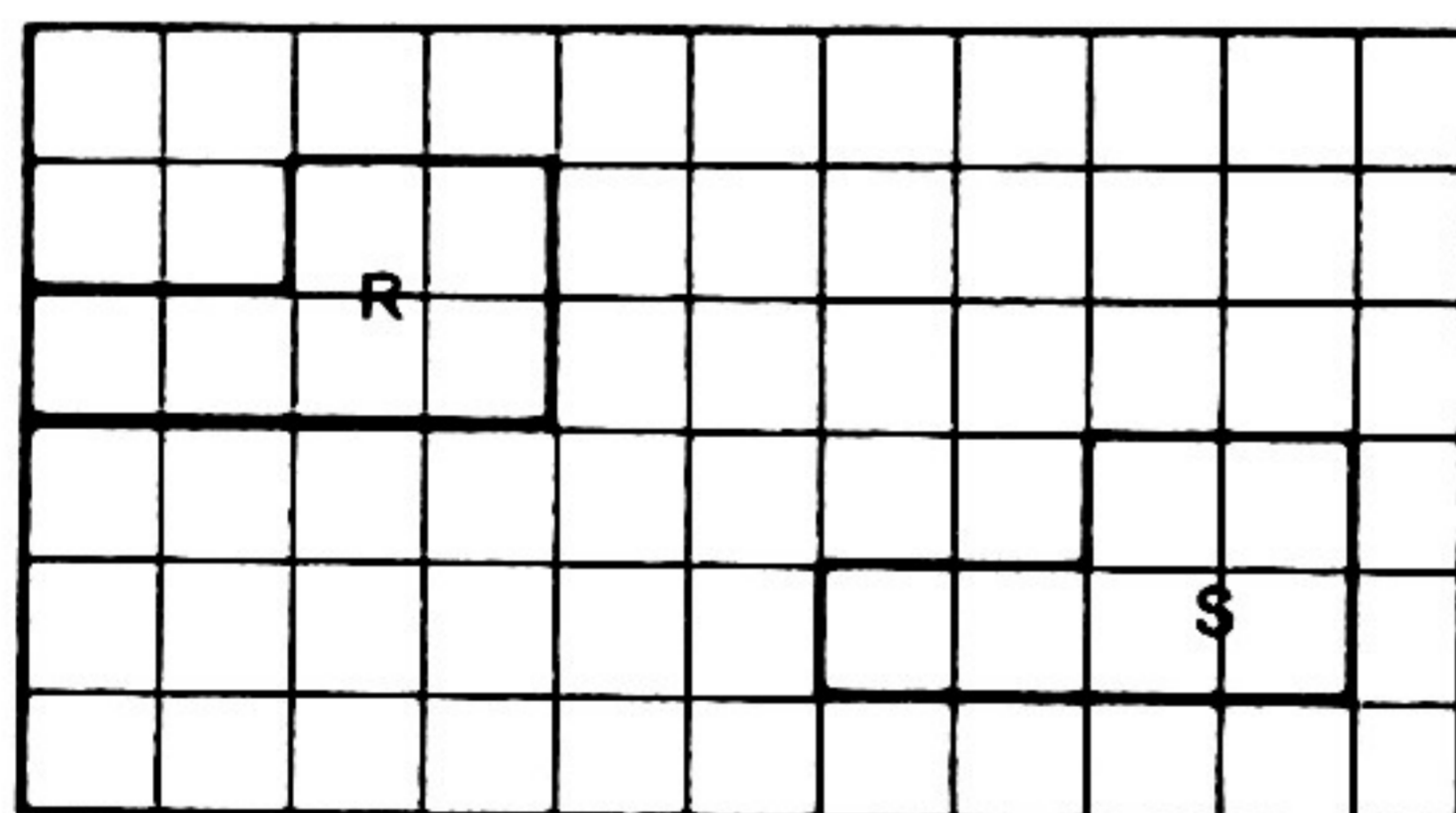
58. In the diagram below the numbers in a row, a column and diagonal have the same sum of 10.



Which numbers are represented by **P** and **X**?

	<b>P</b>	<b>X</b>
<b>A</b>	1	3
<b>B</b>	3	1
<b>C</b>	10	0
<b>D</b>	0	10

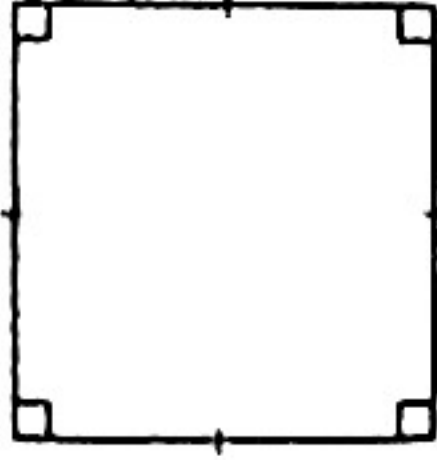
59. What is the name of the transformation that maps **R** onto **S** in the diagram below?



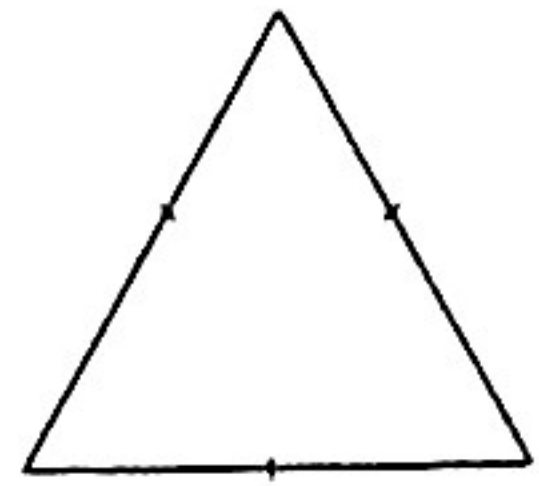
- A Rotation
- B Reflection
- C Translation
- D Enlargement

60. Which of the following is an irregular polygon?

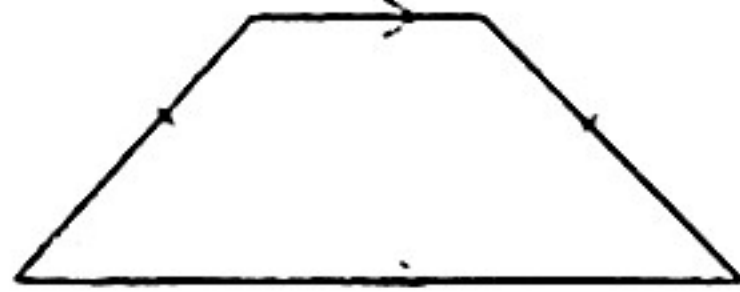
A



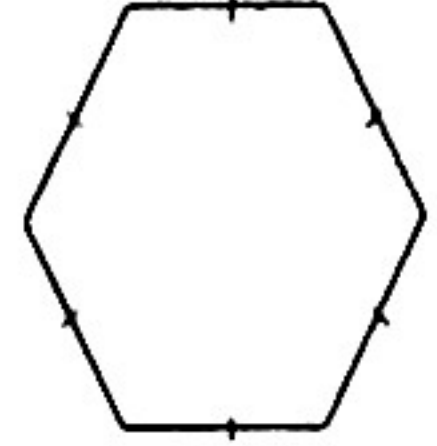
B



C



D



12

113

