



KASLER

Kaslova & Seneyevs Learning & Educational Resources

**PRACTICE  
PAPER 1  
SCHOOL  
CERTIFICATE  
TEST**

**MATHEMATICS**

**SECTION 2**

**Part A**

**NAME**

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**Directions for Section 2–Part A**

1. You have 90 minutes to answer Section 2 Part A and Part B
2.
  - Part A Questions 26-75 (50 marks)
  - Allow about 60 minutes to answer this part
3. Calculators may be used in this part
4.
  - Complete your answers to Questions 26–50 on Section 2–Part A–Answer Sheet 2
  - Complete your answers to Questions 51–69 on Section 2–Part A–Answer Sheet 3
  - Complete your answers to Questions 70–75 in this booklet
5. Write your NAME at the top of this page

Complete your answers to Questions 26–50 on the Section 2–Part A– Answer Sheet 2.

- 26 A group of Year 10 students made up a cube shaped storage box that had a volume of  $1\text{m}^3$ .

Estimate how many soccer balls could fit into the storage box if a soccer ball has a diameter of about 25cm.

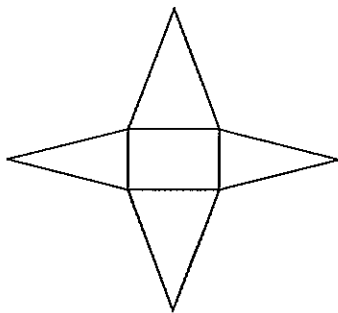
- (A) 10                      (B) 50                      (C) 100                      (D) 300

- 27 Simon works at a shop where his normal rate of pay is \$7.50 per hour. If he works on Saturday he gets paid time-and-a-half.

How much will he earn for working on Saturday if he works from 9am to 12:30pm ? (Answer to the nearest cent)

- (A) \$11.25              (B) \$26.25              (C) \$37.13              (D) \$39.38

- 28 The net below will form what solid shape?



- (A) A rectangular prism  
(B) A rectangular pyramid  
(C) A triangular prism  
(D) A triangular pyramid

- 29 To calculate the cost (\$ $C$ ) of a trip a taxi driver uses the formula

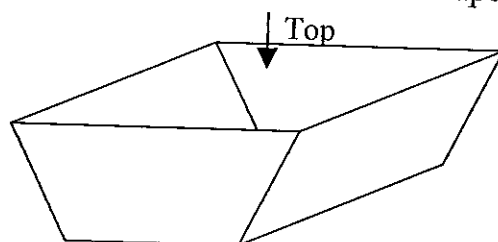
$$C = 4 + 2n$$

where  $n$  is the number of kilometres travelled.

How far could I travel if I had \$24?

- (A) 3 km              (B) 10 km              (C) 14 km              (D) 50 km

30 The figure below shows an open container in the shape of a trapezoidal prism.



Which diagram is the view from the top?

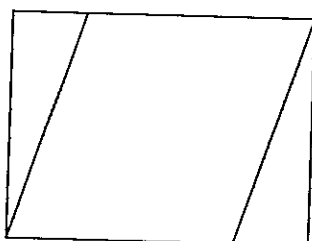
(A)



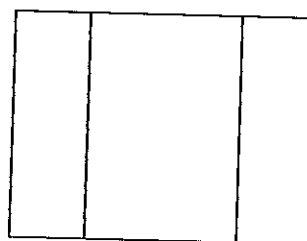
(B)



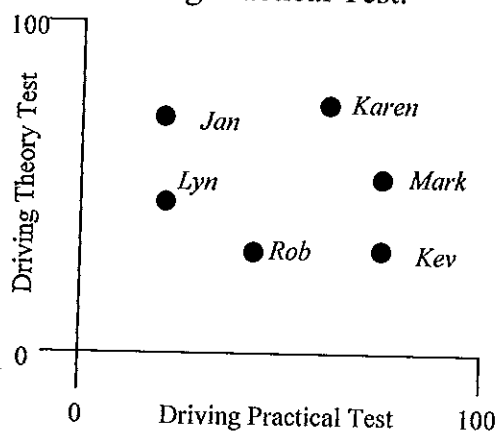
(C)



(D)



31 The graph below shows the results scored by a group of students in a Driving Theory Test and a Driving Practical Test.



Which student had a better Theory result than Mark but had a worse practical result than Karen?

(A) Lyn

(B) Jan

(C) Rob

(D) Kev

- 32 Charlie the chocolate maker sold his chocolates in packages that measured 10cm by 10cm by 10cm.

When he received a big order for his chocolates he decided to send out a larger package measuring 20cm by 20cm by 20cm.

How many of the smaller packages would fit into the larger package?

- (A) 2                      (B) 4                      (C) 8                      (D) 16

- 33 A car company offers a car to be bought on the following conditions.

- A deposit of \$2000
- Remainder to be paid over two years
- Each monthly repayment is \$110

What is the total cost for buying the car on these conditions?

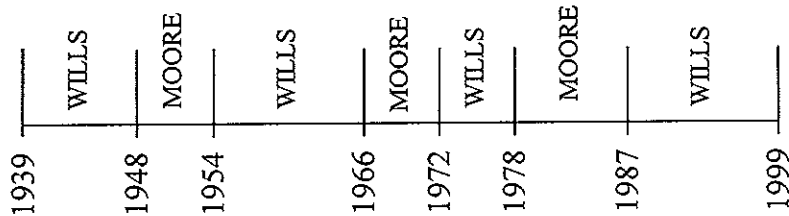
- (A) \$2220              (B) \$2640              (C) \$4640              (D) \$13 440

- 34 In a raffle, 300 blue tickets and 100 yellow tickets are sold.

If 8 tickets are drawn at random, what is the most likely number of each colour?

- (A) 4 blue and 4 yellow                      (B) 6 blue and 2 yellow  
 (C) 5 blue and 3 yellow                      (D) 7 blue and 1 yellow

- 35 Two schools WILLS and MOORE have an annual rowing race. The time line below shows which school held the title from 1939 to 1999.



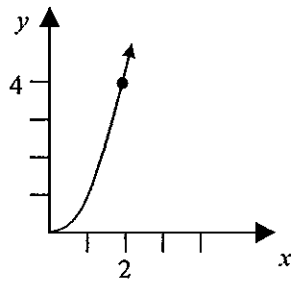
Which of the following is the closest to the percentage of time that MOORE has held the rowing title from 1939 to 1999?

- (A) 21%                      (B) 35%                      (C) 65%                      (D) 79%

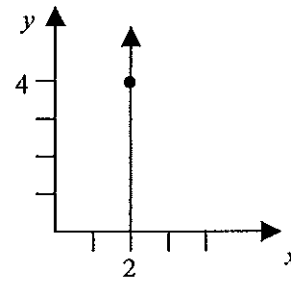


39 Which graph represents the rule,  $y = x^2$ ?

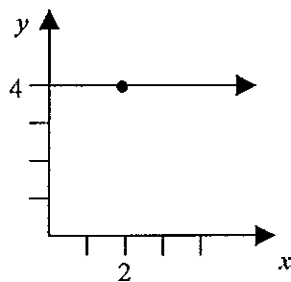
(A)



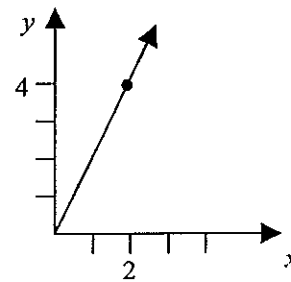
(B)



(C)



(D)



40 Teri the Truck Driver left home at 9 am and arrived at his destination at 12 pm.

Which of the following would give us the best approximation for the distance he has travelled?

- (A) His speed at 10:30 am.
- (B) The number of times he stopped and the time spent at each stop.
- (C) His maximum and minimum speeds.
- (D) His average speed for the journey.

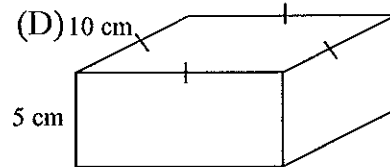
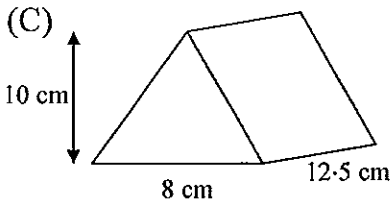
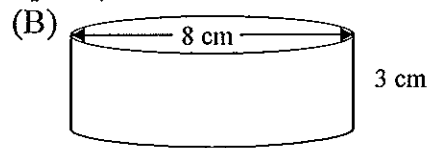
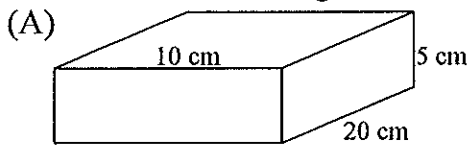
41 Kerry paid \$9 for a chicken weighing 2 kg.

After all bones and fat was removed there was 1.5 kg of usable chicken remaining.

What was the price per kilogram of the chicken that could be used?

- (A) \$3
- (B) \$6.75
- (C) \$6
- (D) \$27

42 Which of the following containers has a capacity of 1 litre?

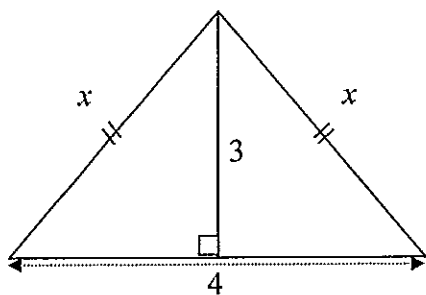


43 In an office there were 100 female workers and 60 male workers. An office survey was to be done about their favourite lunches.

Which sample below would provide the most reliable results?

- (A) 15 females and 15 males
- (B) The first 100 people to take their lunch break
- (C) 25 males and 25 females
- (D) 20 females and 12 males

44 Which statement is true about the following diagram?



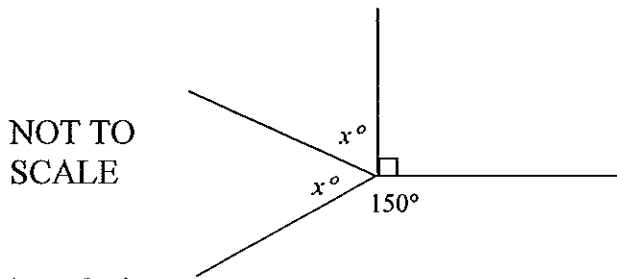
- (A)  $x^2 = 3^2 + 2^2$
- (B)  $x^2 = 3^2 + 4^2$
- (C)  $x^2 = 4^2 - 3^2$
- (D)  $x^2 = 3^2 - 2^2$

45 A car dealer sold 480 cars in 1999. This was 8% higher than in 1998.

The amount of car sales in 1998 was

- (A) 438
- (B) 442
- (C) 444
- (D) 472

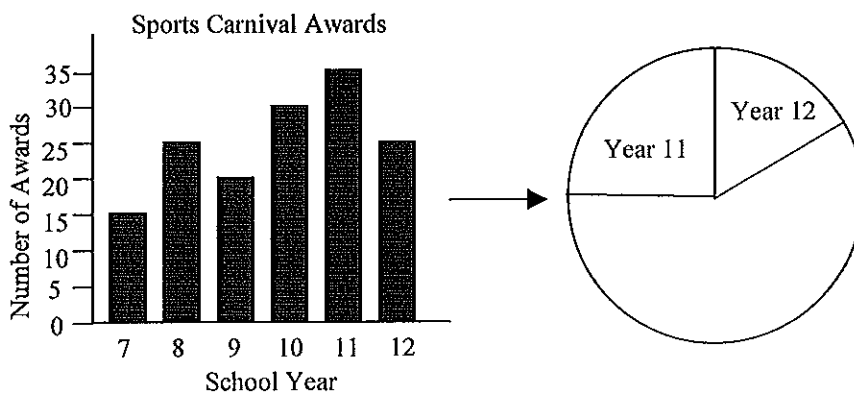
46



The value of  $x$  is

- (A)  $60^\circ$                       (B)  $75^\circ$                       (C)  $90^\circ$                       (D)  $120^\circ$

47



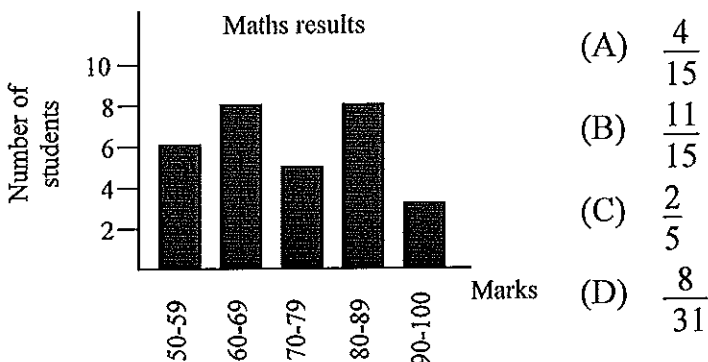
A school has 150 students receiving medals from a sports carnival. The column graph shows the number of medals awarded in each school year. A sector graph of the same information is being drawn.

What will be the size of the angle, in degrees, for the Year 10 students?

- (A)  $28^\circ$                       (B)  $36^\circ$                       (C)  $72^\circ$                       (D)  $90^\circ$

48 The graph below shows the distribution of results in a Maths test. A student is chosen at random.

The probability that this student scored in the 80-89 range is



- (A)  $\frac{4}{15}$   
 (B)  $\frac{11}{15}$   
 (C)  $\frac{2}{5}$   
 (D)  $\frac{8}{31}$



49 Examine the equation below and its solution.

$$\frac{5x + 3}{4} = 8 \quad \text{Line 1}$$

$$5x + 3 = 2 \quad \text{Line 2}$$

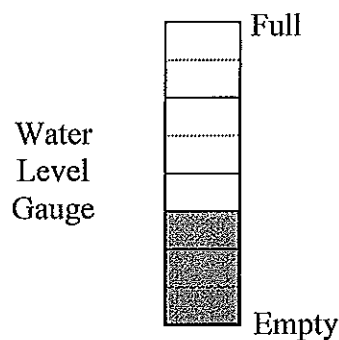
$$5x = -1 \quad \text{Line 3}$$

$$x = -\frac{1}{5} \quad \text{Line 4}$$

Which of the following statements is true?

- (A) A mistake occurs from Line 1 to Line 2
- (B) A mistake occurs from Line 2 to Line 3
- (C) A mistake occurs from Line 3 to Line 4
- (D) There are no mistakes in this solution

50 Jack checks the water level in a storage tank every day. If the tank is not full then he must trigger a pump to fill up the tank. The tank has a capacity of 360 litres. The gauge level for a certain day is shown.



How many litres must be pumped into the tank to fill it up?

- (A) 135
- (B) 180
- (C) 225
- (D) 275

**Complete your answers to Questions 51-69 on the Section 2–Part A– Answer Sheet 3.**

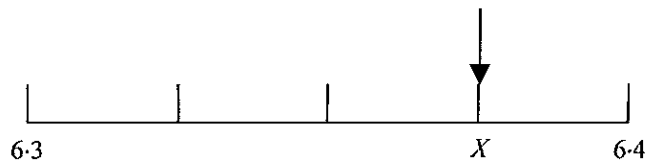
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51 Rachel scored marks of 64% and 72% in a Mathematics test.

What percentage must she score in her next test so that she has an average of 74% for the three tests?

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52 Write the value of the decimal represented by  $X$ .

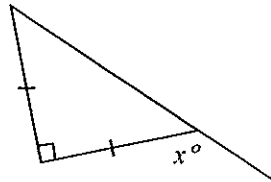


53 Two clocks are sitting on the wall. Clock A is three seconds slower than Clock B over 24 hours.

How far is Clock A behind Clock B after 8 weeks?

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54 Find the value of  $x$  in the following diagram.



55 When one piece of paper is torn in half, there are two pieces. When both pieces are torn again there are four pieces. When all are torn again there are eight pieces.

How many pieces of paper would there be if there were 8 tears.

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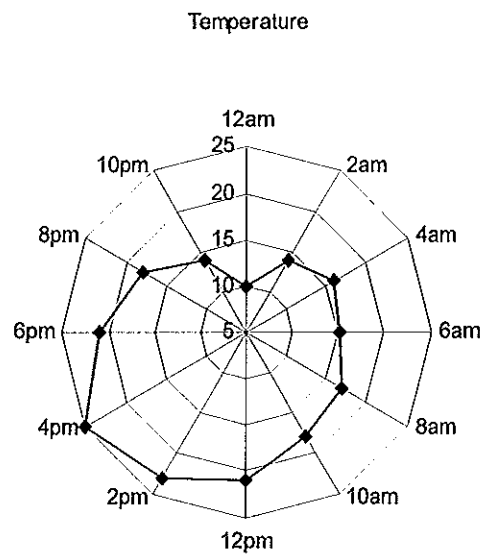
56

BUS TIMETABLE				
	am	am	am	am
Smithville	6:04	7:11	8:02	8:37
Benison	6:09	7:15	8:06	
Hewtown	6:21			
Davidfern	6:28	7:34	8:25	8:51
Meadowfield	6:39	7:45	8:34	
Kingstown	6:45	7:51	8:40	9:11

Richard catches the train at Smithville and works near Meadowfield. It is an 8-minute walk from Meadowfield station to his office. He needs to be at work for a 9:00am meeting.

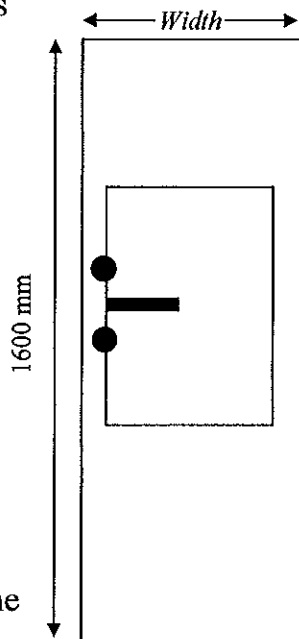
What is the latest train that he can catch from Smithville to make the meeting?

57 The graph below shows the temperature for a day.



What is the range in temperature for this day?

- 58 The scale diagram to the right shows the top view of a kitchen sink.



Use the scale drawing to calculate the width of the sink in millimetres.

- 59 The following stem-and-leaf plot represents the scores of a class in a test.

Boys		Girls
0	10	
7 5	9	3 8 9
8 5 2	8	4 8
6 2 0	7	1 5 9
9 8 4	6	2 5 7
7 4	5	2 8
8	4	9

What is the difference between the medians for the boys and the girls?

- 60 The cost of 4 sandwiches and 2 cans of drink is \$13.  
The cost of 3 sandwiches and 1 can of drink is \$9.

Find the cost of one sandwich.

- 61 The area of a rectangle is 24 square centimetres.  
The lengths of the sides are whole centimetres.

Give a possible value for the perimeter of the rectangle.

Use the following information to answer Questions 62 and 63.

Twenty people were surveyed to find out how many children were in their family.

The results are shown in the table.

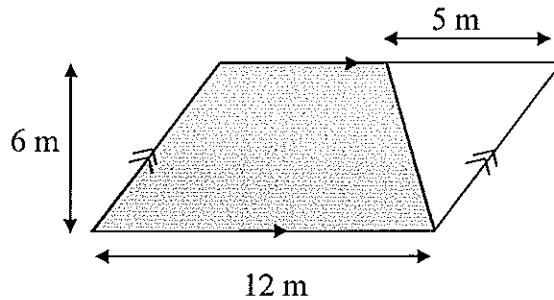
<i>Number of children in family</i>	<i>Number of people</i>
1	1
2	6
3	7
4	4
5	2

62 Find the *mean* number of children in each family.

63 One person was chosen at random from the survey.

What is the probability, as a percentage, that the family has 4 children in their family?

64



NOT TO SCALE

Calculate the area of the shaded area.

Each of Questions 65, 66, 67, 68 and 69 may have MORE THAN ONE correct answer. Fill in EVERY correct answer for each of these questions on Section 2 - Answer Sheet 3.

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65 Which of the following are true statements?

(A)  $g + g - g = g^2$

(B)  $g + g - g = g$

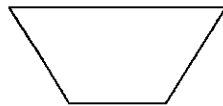
(C)  $g \div g \times g = g$

(D)  $g \times g \div g = g$

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66 Which of the following shapes have exactly two axes of symmetry?

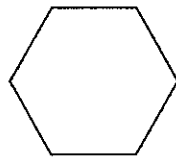
(A) TRAPEZIUM



(B) ELLIPSE



(C) HEXAGON



(D) RECTANGLE



67 A solution to an equation is  $A = 20$ .

The question could have been

(A)  $A^2 = \sqrt{25^2 - 15^2}$

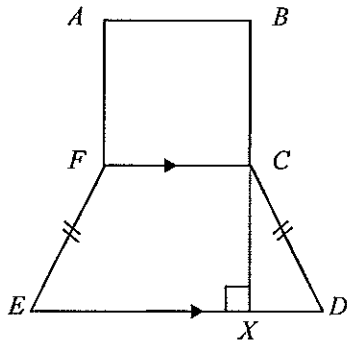
(B)  $118 = 5A + 18$

(C)  $A = 10 - 6 \times 5$

(D)  $3A^2 = 1200$

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68



$ABCF$  is a square.

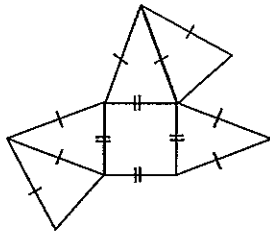
$AF = CX = 8$  cm.

What piece of additional information on its own would allow you to calculate the area of  $ABCDEF$ ?

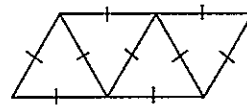
- (A)  $EX$
- (B)  $CD$
- (C)  $ED$
- (D)  $CF$

69 Which of the following nets will form a solid shape?

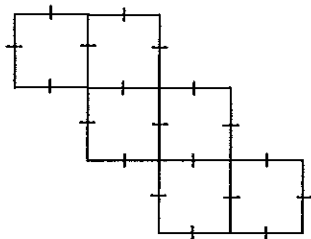
(A)



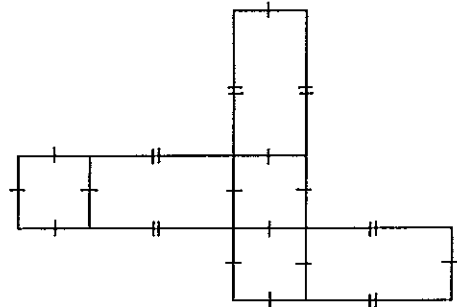
(B)



(C)



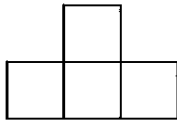
(D)



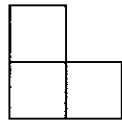
End of questions in Section 2 Part A that may require you to fill in more than one correct answer.

Complete your answers to Questions 70 - 75 in this booklet.

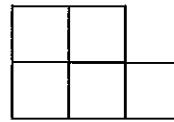
70 Three views of a three-dimensional shape are shown below.



Top view

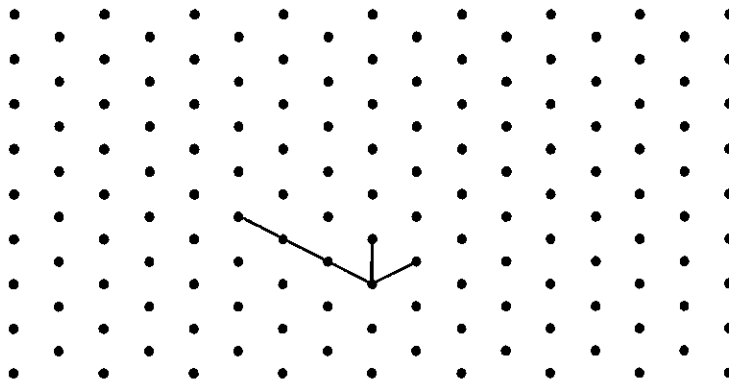


Side view

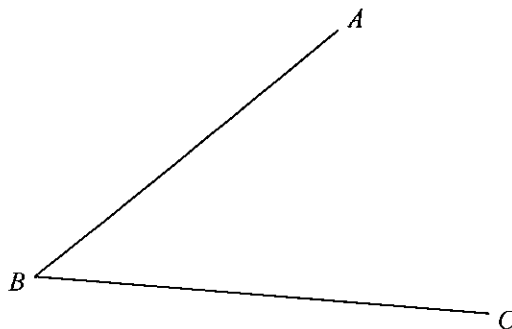


Front view

Complete the drawing of this shape.



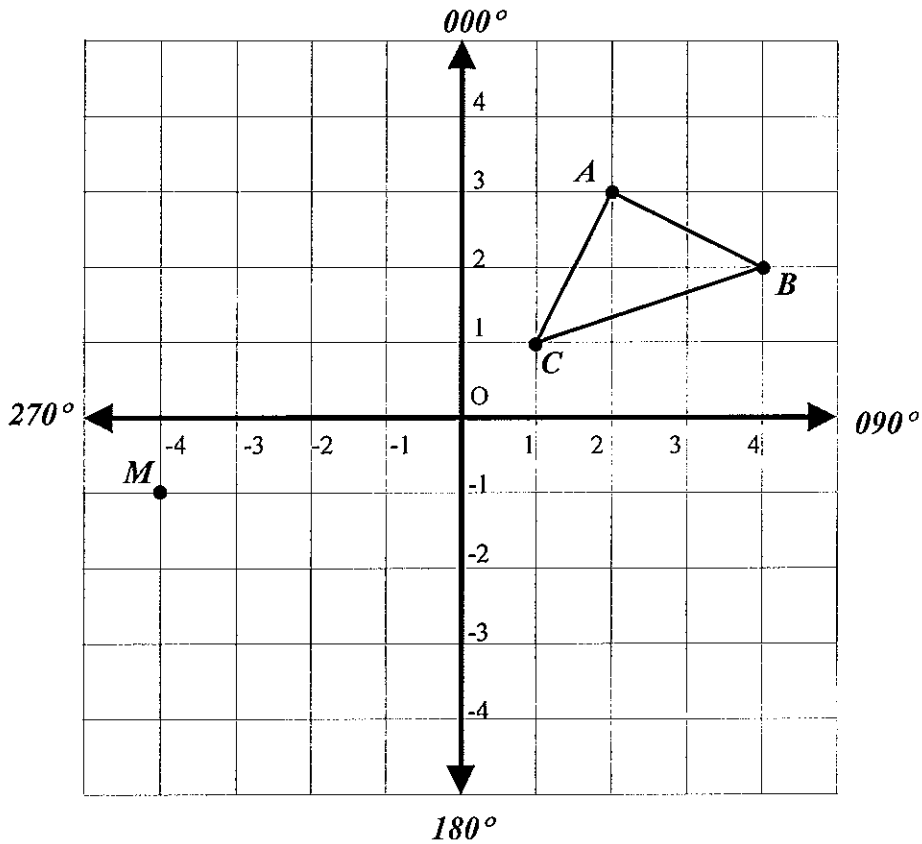
71



Complete the diagram to bisect  $\angle ABC$ .



Use the following diagram to answer Questions 72 and 73.



72  $M$  has the coordinates  $(-4, -1)$ .

$M$  is rotated  $90^\circ$  clockwise about  $O$ .

What are the new coordinates of  $M$ ?

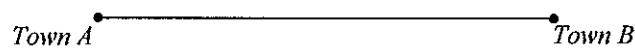
(  ,  )

73 Triangle  $ABC$  is rotated  $180^\circ$  about  $O$ .

Draw the triangle in its new position.

- 74 A scale drawing is drawn below of a straight road that joins Town A to Town B. The two towns are  $y$  km apart. Town C is also  $y$  km from both Town A and  $y$  km from Town B.

Use geometrical instruments to draw the position of Town C.



- 75 Draw in the straight road that goes from Town A to Town C and the road that goes from Town B to Town C.

What type of shape has been formed?