



education

Department of
Education
FREE STATE PROVINCE

GRADE 8

MATHEMATICS

NOVEMBER 2022

This question paper consists of 6 pages.

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of **FIVE** questions. Answer **ALL FIVE** questions.
2. Number the answers exactly as on the paper.
3. Start each question on a new page and draw a line at the end of each question.
Leave a space between each number.
4. You may use an approved calculator, unless stated otherwise.
5. Show all your calculations and it is in your own interest to work neatly.
6. Round off **ALL** the final answers off to **TWO decimal places**, unless stated otherwise.
7. **Good Luck!**

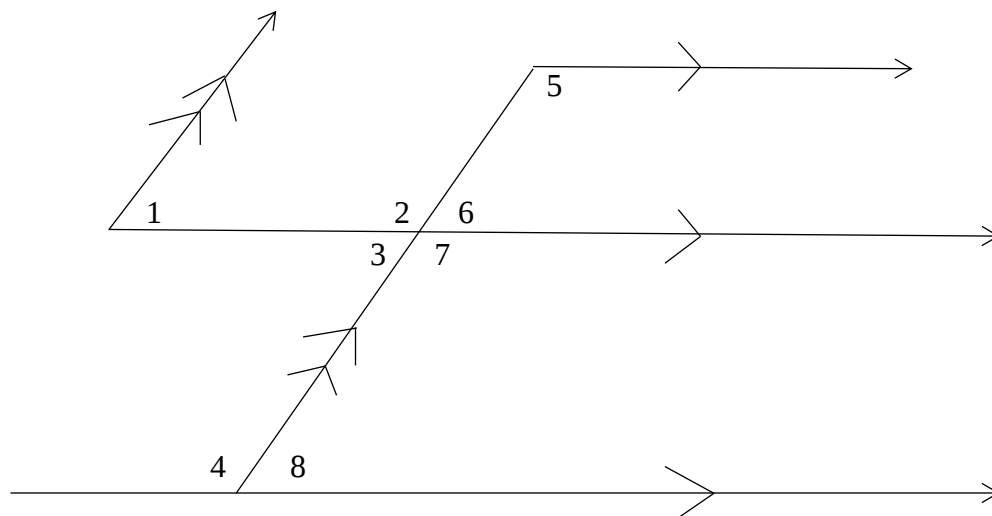
QUESTION 1

Complete:

- 1.1 The supplement of 35° is (1)
 - 1.2 70° is the of 20° (1)
 - 1.3 An angle of 360° is called a (1)
 - 1.4 A triangle with three equal sides is called (1)
 - 1.5 In a right-angled isosceles triangle the sizes of the angles are
..... $^\circ$, $^\circ$ and $^\circ$ (3)
 - 1.6 Vertically opposite angles are (1)
- [8]**

QUESTION 2

Consider the diagram below and identify the names (reasons) of the following pairs of angles:

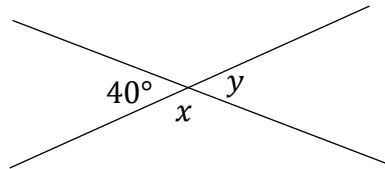


- 2.1 1 and 2 (1)
 - 2.2 5 and 7 (1)
 - 2.3 3 and 8 (1)
 - 2.4 3 and 6 (1)
 - 2.5 4 and 8 (1)
- [5]**

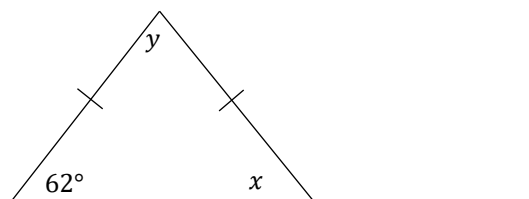
QUESTION 3

Determine with REASONS the values of x and y in each of the following figures:

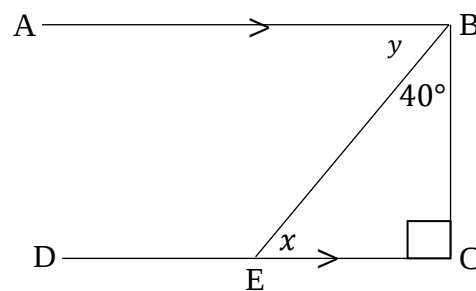
3.1 (4)



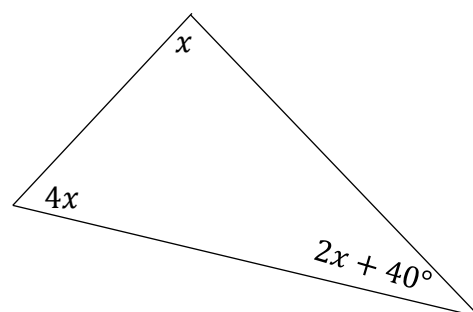
3.2 (4)



3.3 (5)



3.4 (4)

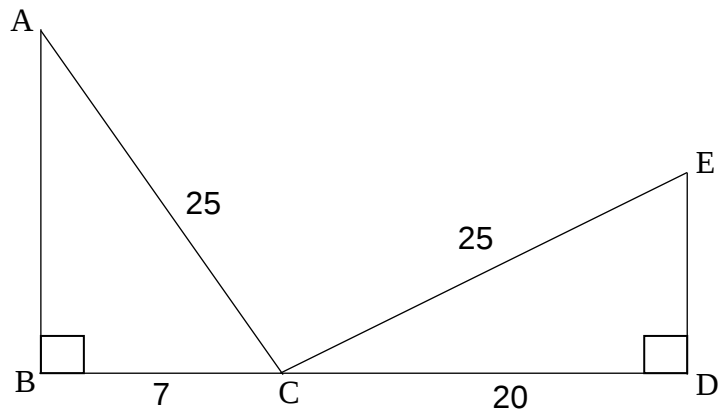


[17]

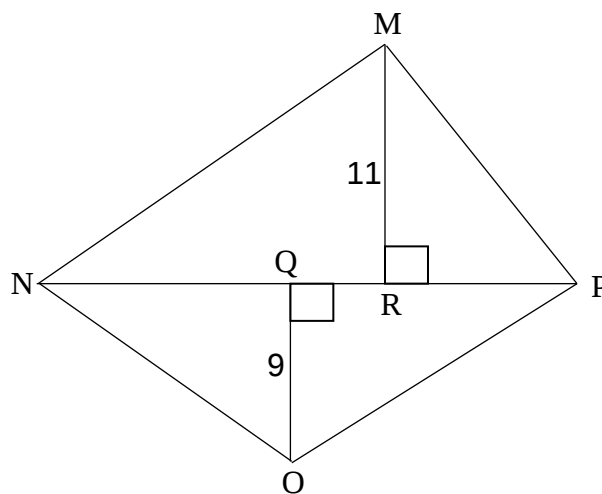
QUESTION 4

4.1 Determine how much AB is longer than DE

(7)



4.2 In the diagram below:



4.2.1 Determine the area of $MNOP$ if $NP = 17\text{cm}$

(3)

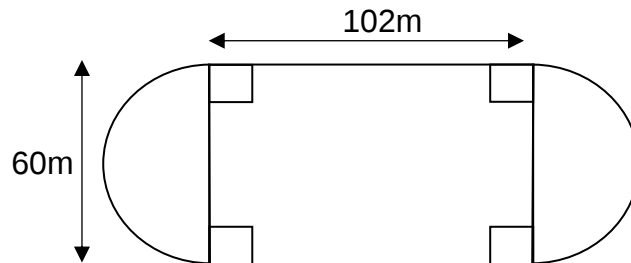
4.2.2 If it is further given that OQ is the perpendicular bisector of NP, and $QR = x$, determine the Area of $\triangle MRP$ *in terms of x*.

(3)

[13]

QUESTION 5

Consider the athletic track below and answer the questions that follow:



- 5.1 Determine the perimeter of the following athletic track. (correct to two decimal places) (3)
- 5.2 Determine the area of the rectangular part of the track. (4)
- [7]