

Q17. (2017)

- 17 A is the point $(2, -5)$
 B is the point $(4, -9)$

(A)

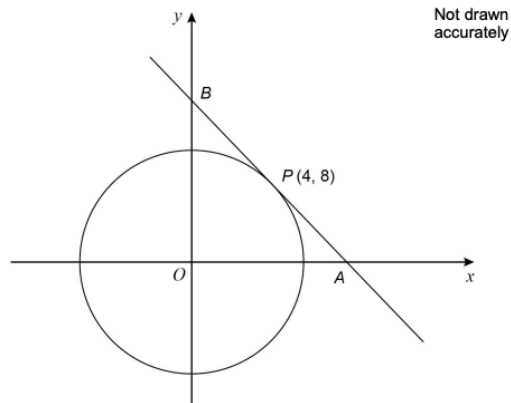
- 17 (a) Show that the gradient of the straight line passing through A and B is -2 [2 marks]

(B)

- 17 (b) C is the point $(-301, 601)$
 Does C lie on the straight line passing through A and B ?
 You **must** show your working. [2 marks]

Q2. (2019)

- 25 $P(4, 8)$ is a point on a circle, centre O .
 The tangent at P intersects the axes at points A and B .



(A)

- 25 (a) Show that the gradient of the tangent is $-\frac{1}{2}$ [2 marks]

(B)

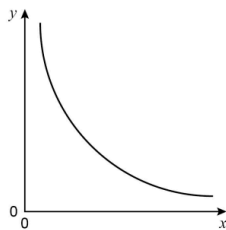
25 (b) Work out the length AB .Give your answer in the form $a\sqrt{5}$ where a is an integer.You **must** show your working.

[4 marks]

Answer _____ units

Q3. (2021)

4 Here is a sketch of a graph.



Circle the equation of the graph.

 k is a constant.

[1 mark]

$y = kx$

$y = k + x$

$y = k - x$

$y = \frac{k}{x}$

Q4. (2022)

1 Which of these is the equation of a straight line?

Circle your answer.

[1 mark]

$y = 6x^2$

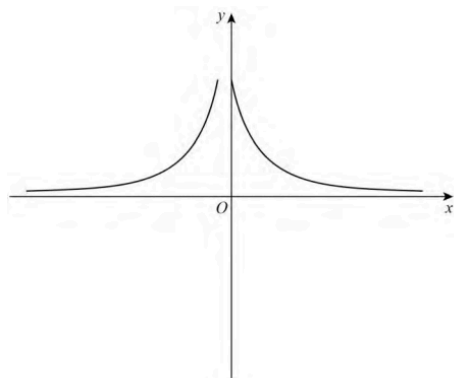
$y = x - 6$

$y = x^2 + 6$

$y = \frac{6}{x}$

Q5. (2023)

- 9 Erika tries to sketch the graph $y = \frac{1}{x}$ with $x \neq 0$



Make **two** different criticisms of her sketch.

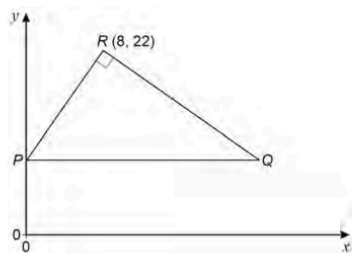
[2 marks]

Criticism 1 _____

Criticism 2 _____

Q6. (2023)

- 24 Points P , Q and $R(8, 22)$ form a triangle.



Not drawn
accurately

PQ is a horizontal line, with P on the y -axis.

Angle PRQ is a right angle.

The gradient of PR is 2

Work out the coordinates of Q .

[5 marks]

Answer (_____ , _____)