Practice paper 2 (calculator)

Higher tier

Time: 1 hour 30 minutes

The maximum mark for this paper is 80.
The marks for questions are shown in brackets.

1 Circle the expression that is the same as $2x^2 + \frac{3x^2}{x} + x$

$2x^2 + 4x$ $5x^2 + x$

$3x^2 + 4x$ $9x$

[1 mark]

2 Circle the solutions to the equation $(x - 3)(x + 4) = 0$

$x = -3$ or 4 $x = 3$ or 4

$x = 3$ or -4 $x = 0$

[1 mark]

3 Circle the square root of 10 000.

100 1000

500 5000

[1 mark]

4 $\mathbf{a} = \begin{pmatrix} 2 \\ 1 \end{pmatrix}$ and $\mathbf{b} = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$

Circle the vector that is equal to $3\mathbf{a} - 2\mathbf{b}$

$\begin{pmatrix} 8 \\ 3 \end{pmatrix}$ $\begin{pmatrix} 4 \\ 3 \end{pmatrix}$

$\begin{pmatrix} 5 \\ 3 \end{pmatrix}$ $\begin{pmatrix} 0 \\ 3 \end{pmatrix}$

[1 mark]

5 A house increased in value from £150 000 in 2014 to £170 000 in 2016.

What percentage increase is this?

Give your answer to 1 decimal place.

.....

[2 marks]

6 Use your calculator to work out $19.85^2 - \sqrt{98.67} \div 4.67$

a Write down your full calculator display.

.....

[1 mark]

b Use approximations to check that the answer to part (a) is sensible.

You **must** show your working.

.....

[1 mark]