M7 =4 days to go!

4 Estimate $\sqrt{\frac{3855}{37.5}}$ $\approx \sqrt{\frac{4000}{40}} \approx \sqrt{100} \approx 10$

Answer 10 [2]

12. a, b and c are standard form numbers.

$a = 5.4 \times 10^4$ $b = 4.9 \times 10^5$ $c = 4 \times 10^6$

(a) Calculate b – a

$4.9 \times 10^5 - 5.4 \times 10^4$

$490000 - 54000$

$$\begin{array}{r} 490000 \\ -\ 54000 \\ \hline 436000 \end{array}$$

4.36×10^5

(2)

(b) Calculate c^2

$c^2 = (4 \times 10^6)^2 = (4\,000000)^2$

$(4 \times 10^6) \times (4 \times 10^6)$

16×10^{12}

1.6×10^{13}

(2)

(c) Calculate ac

$1.6 \times 10 \times 10^{12}$

$5.4 \times 10^4 \times 4 \times 10^6$

21.6×10^{10}

$2.16 \times 10^1 \times 10^{10}$

2.16×10^{11}

(2)

8. Solve the simultaneous equations

$3x + 2y = 16$
$2x - 3y = 2$

$3x + 2y = 16$ (×3)
$2x - 3y = 2$ (×2)

To make y numbers the same

Do not use trial and improvement

$9x + 6y = 48$
$4x - 6y = 4$

$13x = 52$

$x = 4$

Now put $x = 4$ into original equation

$3x + 2y = 16$

$3(4) + 2y = 16$

$12 + 2y = 16$

$2y = 4$

$y = 2$

Don't forget to check!

x = 4 ..... y = 2 .....

(4)

11. The number of visitors to some tourist attractions is shown in the table below.

The King's Palace	5.4 million
Castle	923,840
Theme Park	1.43×10^7
Science Museum	4,192,900

(a) Write the number of visitors to the Theme Park as an ordinary number.

1.43×10^7

14300000

14300000 .....

(1)

(b) Write the number of visitors to the Castle in standard form.

923840

9.2384×10^5

9.2384×10^5 .....

(1)

Use all digits that are not zero