

ERRATA

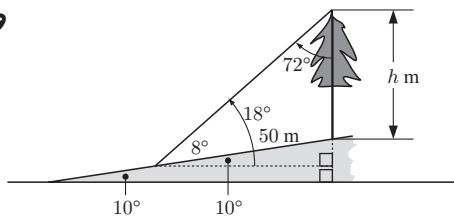
MATHEMATICS FOR THE INTERNATIONAL STUDENT MATHEMATICAL STUDIES SL third edition - WORKED SOLUTIONS

Third edition - 2013 initial print

The following erratum was made on 04/Oct/2018

page 376 **REVIEW SET 15B** question **9**, replace with:

9



$$\frac{h}{\sin 8^\circ} = \frac{50}{\sin 72^\circ} \quad \{\text{sine rule}\}$$

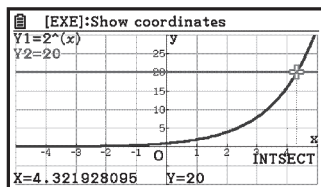
$$\therefore h = \frac{50 \times \sin 8^\circ}{\sin 72^\circ}$$

$$\therefore h \approx 7.32$$

So, the tree is 7.32 m high.

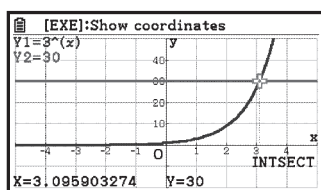
EXERCISE 18C

- 1 a To solve $2^x = 20$, we graph $Y1 = 2^x$ and $Y2 = 20$.



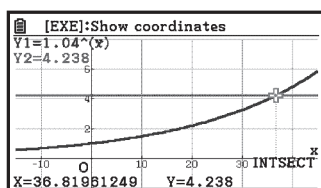
The graphs intersect at (4.32, 20), hence the solution is $x \approx 4.32$.

- c To solve $3^x = 30$, we graph $Y1 = 3^x$ and $Y2 = 30$.



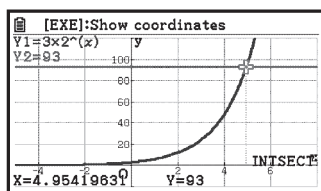
The graphs intersect at (3.10, 30), hence the solution is $x \approx 3.10$.

- e To solve $(1.04)^x = 4.238$, we graph $Y1 = (1.04)^x$ and $Y2 = 4.238$.



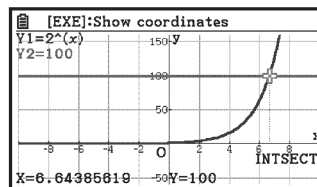
The graphs intersect at (36.8, 4.238), hence the solution is $x \approx 36.8$.

- 2 a To solve $3 \times 2^x = 93$, we graph $Y1 = 3 \times 2^x$ and $Y2 = 93$.



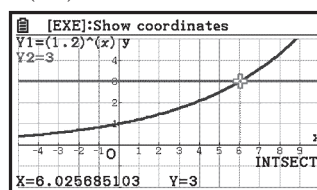
The graphs intersect at (4.95, 93), hence the solution is $x \approx 4.95$.

- b To solve $2^x = 100$, we graph $Y1 = 2^x$ and $Y2 = 100$.



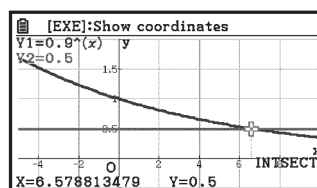
The graphs intersect at (6.64, 100), hence the solution is $x \approx 6.64$.

- d To solve $(1.2)^x = 3$, we graph $Y1 = (1.2)^x$ and $Y2 = 3$.



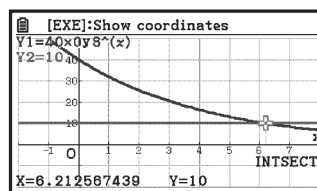
The graphs intersect at (6.03, 3), hence the solution is $x \approx 6.03$.

- f To solve $(0.9)^x = 0.5$, we graph $Y1 = (0.9)^x$ and $Y2 = 0.5$.



The graphs intersect at (6.58, 0.5), hence the solution is $x \approx 6.58$.

- b To solve $40 \times (0.8)^x = 10$, we graph $Y1 = 40 \times (0.8)^x$ and $Y2 = 10$.



The graphs intersect at (6.21, 10), hence the solution is $x \approx 6.21$.

The following errata were made on 6/Dec/2016

page 23 **EXERCISE 2E.3** question **5 e**, should read:

5 e	$\sqrt{0.023} \approx 0.151\,657\,509$	f	$(0.132)^4 \approx 0.000\,303\,596$
	$\approx 0.152 \quad (3 \text{ s.f.})$		$\approx 0.000\,304 \quad (3 \text{ s.f.})$
	{Round up , as $6 > 5$ }		{5 is rounded up}

page 23 **EXERCISE 2E.3** question **7 c**, should read:

7 a $3.995 \times 10^{13} \approx 4.00 \times 10^{13} \quad (3 \text{ s.f.}) \quad \{5 \text{ is rounded up}\}$

b $2.592 \times 10^7 \approx 2.59 \times 10^7 \quad (3 \text{ s.f.}) \quad \{\text{Round down, as } 2 < 5\}$

c $7.08\overline{3} \times 10^{-9} \approx 7.08 \times 10^{-9} \quad (3 \text{ s.f.}) \quad \{\text{Round down, as } 3 < 5\}$

page 23 **EXERCISE 2E.3** question **8 e**, should include units, and have parts **i** and **ii** labelled correctly:

8 e i Mass of C = $2.63 \times 10^{-5} = 0.000\,026\,3 \text{ g}$ Mass of D = $8 \times 10^{-7} = 0.000\,000\,8 \text{ g}$
 $\therefore$ microbe C is heavier.

ii $\frac{\text{Mass of C}}{\text{Mass of D}} = \frac{2.63 \times 10^{-5}}{8 \times 10^{-7}} \approx 3.29 \times 10^1$
 $\therefore$ microbe C is approximately 32.9 times heavier.