PASS FUNCTIONAL SKILLS

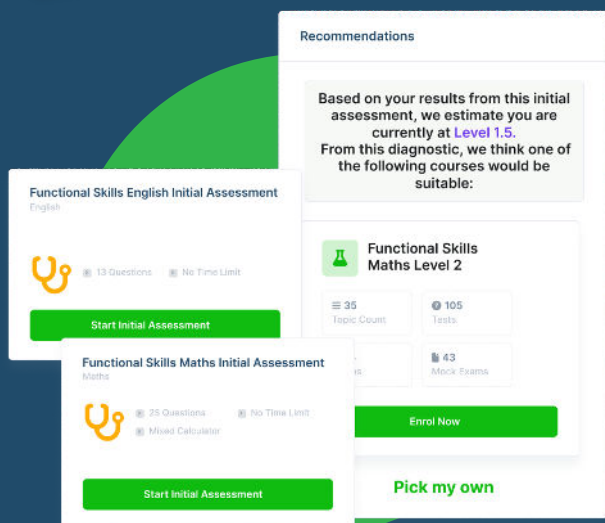# FUNCTIONAL SKILLS ONLINE COURSES

✅ Your answers are analysed to determine your Current Level

✅ Suggested courses for you to enrol on based on your calculated level

✅ Always know the level you are currently working at

✅ Determine when you are ready to sit your exam

✅ Explainer videos on every topic

✅ Quick-fire style mutiple choice questions

✅ Test your knowledge with exam-style questions

✅ Written solutions for all questions
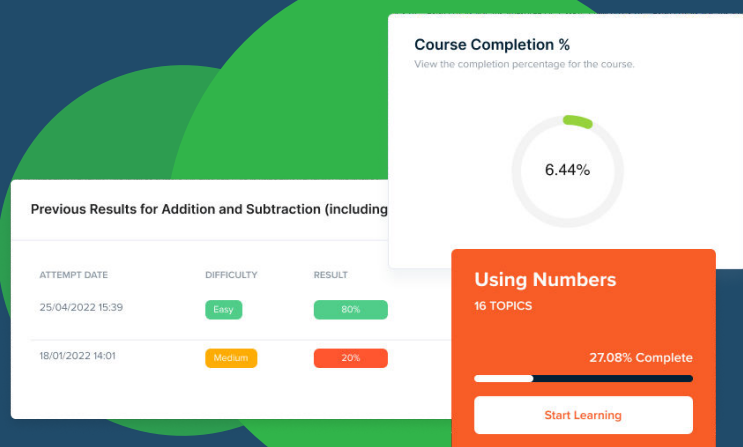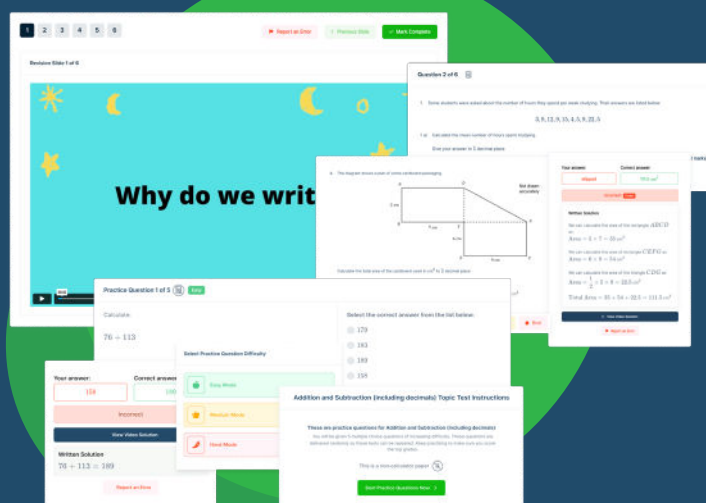
✅ See your progress through as you progress through each topic area

✅ Get your average scores for practice questions, topic tests and mock exams

✅ View all practice question, topic test and mock exam attempts over time

✅ View historical attempts to analyse your progress over time

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Activity 1: Motorcycle racing

1 (a) Damon is a motorcycle racer.
He takes part in two races over a weekend.

4650 spectators watched the race on Saturday.
This number increased by 2% on Sunday.

Increase 4650 by 2%

[2 marks]

multiplier : 1.02

4650 × 1.02 = 4743

$$\begin{array}{r} 4650.00 \\ \times\ \ \ \ 1.02 \\ \hline 93.00 \\ +\ 4650.00 \\ \hline 4743.00 \end{array}$$

Your answer: 4743

Please turn over

3

1 (b)

In the race on Saturday each lap was 2.678 miles long.
1 km = 0.6214 miles

Round **each** of these two figures to 1 decimal place.

Use these values to estimate the length of the lap in km

[3 marks]

$2.678 \approx 2.7$ to 1 decimal place

$0.6214 \approx 0.6$ to 1 decimal place

$\dfrac{2.7}{0.6} = 4.5 \text{ km}$

0.6) 2.7

0.6	1
1.2	2
1.8	3
2.4	4
+0.3	½

Your answer: **4.5** km

4

1 (c)   Damon and Ralphie each complete 7 laps in the race on Sunday.

The median lap time for Damon is 1 minute and 17.924 seconds.
This is shown as 1:17.924

The range of the lap times for Damon is 4.812 seconds.

The table below shows the lap times for Ralphie.

Lap	1	2	3	4	5	6	7
Time (minutes: seconds)	1:21.467	1:19.148	1:17.986	1:16.008	1:16.810	1:17.841	1:18.462

Calculate the median **and** the range of times for Ralphie.
Use these values to make **two** comparisons between the two racers.

[4 marks]

1: 16.008, 1:16.810, 1:17.841, (1:17.986) 1:18.462,

1:19.148, 1:21.467

↑ median

Range = biggest - smallest

= 21.467 - 16.008

= 5.459

$$\begin{array}{r} {}^{1}2^{'}1.4^{5}8^{'}7 \\ -1\ 6.\ 0\ 0\ 8 \\ \hline 0\ 5.\ 4\ 5\ 9 \end{array}$$

Median = 1:17.986

Range = 5.459

Your answer:

Damon's lap times were more consistent as his range was smaller.

The median lap of Damon's race was faster than that of Ralphie's.

Please turn over

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Examiner use of

1 (d) Damon drives along a straight part of the track at an average speed of 126 miles per **hour**.
He completes this in 47.5 **seconds**.

Work out the length of the straight part of the track in miles.

[3 marks]

$126 \div (60 \times 60) = 0.035$ miles per second.

3600 seconds
in an hour

$$000.035$$
$$3600 \overline{) 1'2'^{12}6 \,^{126}\!.\,^{1200}000\,^{1800}}$$

distance = speed × time

= 0.035 × 47.5

= 1.6625 miles

Your answer: **1.6625**   **miles**

6

1 (e)   Damon is paid by 3 companies to advertise their brands on his race suit.

$\dfrac{2}{3}$ of the adverts are for Company A.

$\dfrac{1}{7}$ of the adverts are for Company B.

The rest of the adverts are for Company C.

What fraction of the adverts are for Company C?

[2 marks]

$$\frac{2}{3} + \frac{1}{7} = \frac{14}{21} + \frac{3}{21}$$

$$= \frac{17}{21}$$

$$1 - \frac{17}{21} = \frac{4}{21}$$

Your answer: $\dfrac{4}{21}$

1 (f) 1 540 806 people followed Damon on social media last year.

This number increased by 674 957 people this year.
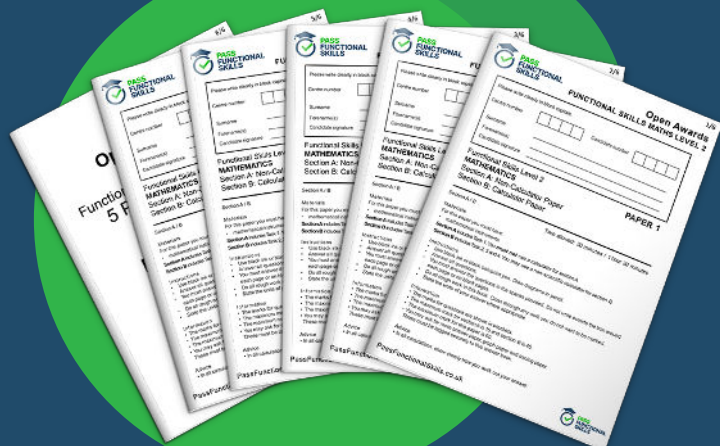
Work out 1 540 806 + 674 957

[1 mark]

$$
\begin{array}{r}
1\ 5\ 4\ 0\ 8\ 0\ 6 \\
+\quad 6\ 7\ 4\ 9\ 5\ 7 \\
\hline
2\ 2\ 1\ 5\ 7\ 6\ 3 \\
\hline
\end{array}
$$

Your answer: 2215763

[Total marks: 15]

This is the end of Section A.

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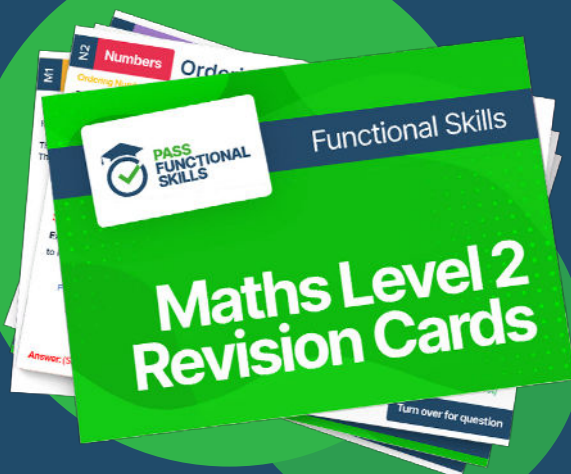
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