

# YEAR 9 NUMERACY – SET 5

Use a calculator to help answer these questions.

Name ..... Date .....

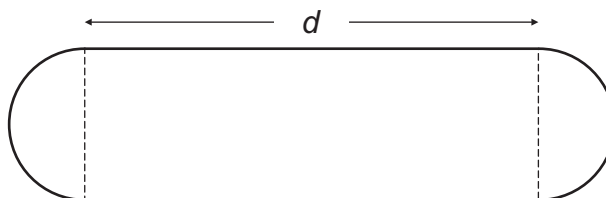
A quadrilateral has two equal angles that are obtuse.

One of the other angles is  $50^\circ$ .

Which of these statements is **definitely true** about the fourth angle?

- 1
- It is obtuse.
  - It is less than  $130^\circ$ .
  - It is more than  $130^\circ$ .
  - It is either acute or right.

The diagram shows a 400-metre running track.



- 2 To find the radius of the semicircular ends of a track like this,

you use the formula  $r = \frac{200 - d}{\pi}$

where  $r$  is the radius and  $d$  is the length of the straights as marked in the diagram.

If the straights are each 75 m long, the radius is closest to

- 16 m.                       40 m.                       152 m.                       176 m.

Which of these four countries has the highest population density (in people per  $\text{km}^2$ )?

3

| Country    | Area ( $\text{km}^2$ ) | Population |
|------------|------------------------|------------|
| Costa Rica | 51 100                 | 4 016 200  |
| Egypt      | 1 001 450              | 77 505 800 |
| Greece     | 131 940                | 10 668 400 |
| Spain      | 504 782                | 40 341 500 |

- Costa Rica                       Egypt                       Greece                       Spain

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A bookshop has a sale.

A book normally costing \$39.95 is priced at \$23.97.

- 4 By what percentage has the price been reduced?

16%

40%

60%

67%

- 5 When  $k = 3$  and  $p = -1$  what is the value of  $\frac{2k^2 + 3}{5 - 2p}$ ?

3

5

7

13

The win : loss ratio of an AFL team after playing 15 games was 2 : 3.

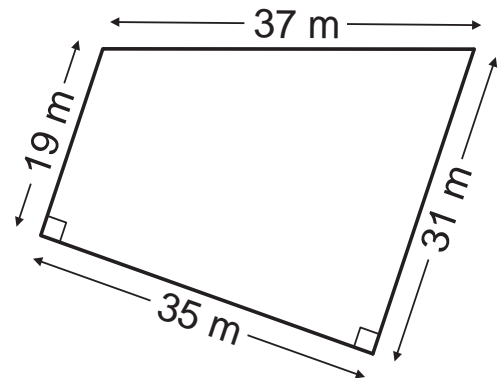
The team then won four of the last seven games of the season.

- 6 What was the team's win : loss ratio at the end of the season?

:

What is the area of this block of land?

- 7  m<sup>2</sup>



- 8 Which one of the following composite numbers has **no** prime factors less than 20?

25781

25783

25787

25789