

Simplify  $(\sqrt{2})^5$ 

$$\underbrace{\sqrt{2} \times \sqrt{2}}_2 \times \underbrace{\sqrt{2} \times \sqrt{2}}_2 \times \sqrt{2}$$

$$4\sqrt{2}$$

An item in a shop is increased in price by 25% and then decreased in price by 25% a month later.

Is there an overall increase or decrease in price and by how much?

$$1.25 \times 0.75$$

$$= 0.9375$$

decrease by 6.25%

The length of a 80m running track is correct to the nearest metre.

$$79.5 / 80.5$$

The time taken for Nicole to run the distance is 13.6 seconds measured to the nearest one-tenth of a second.

$$13.55 / 13.65$$

What is the slowest possible average speed?

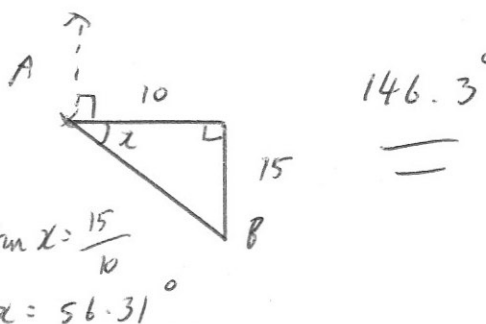
$$\text{min } S = \frac{d_{\text{min}}}{t_{\text{max}}}$$

$$\frac{79.5}{13.65}$$

$$= 5.824 \text{ m/s}$$

A helicopter takes off from town A and travels 10 miles on a bearing of  $090^\circ$  and then 15 miles on a bearing of  $180^\circ$  to land at town B.

What is the bearing of B from A?



A football team obtains 3 points for a win, 1 point for a draw and no points for a loss.

WWD  
 WDW  
 DWW

For any match

$$P(\text{win}) = 0.6 \quad P(\text{draw}) = 0.3$$

$$P(\text{loss}) = 0.1$$

The team plays 3 matches. What is the probability of the team obtaining exactly 7 points?

$$0.6 \times 0.6 \times 0.3 = 0.108$$

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$$0.324$$