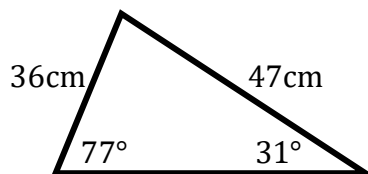


22a Fully factorise $3x^2 - 27$

b. Simplify

$$\frac{3x^2 - 27}{x^2 - 3x - 18}$$

23. Calculate the area of the triangle below.



24. John and Erin were in a book shop.

John bought 3 books and 2 magazines and was charged £43.15

Erin bought 4 books and 3 magazines and was charged £58.75

Write down two equations and solve them to find the cost of one book and the cost of one magazine.

25. A speed camera on a stretch of road recorded 6 drivers who were driving over the Limit. Their speeds, in miles per hour were:

38 42 36 39 41 44

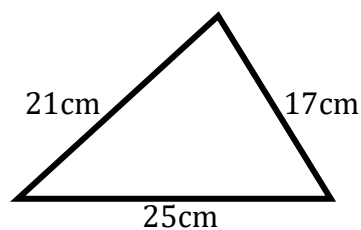
a. Calculate the mean and standard deviation of these speeds.

b. Six other speeding motorists were also recorded.

Their mean speed was 43 miles per hour and the standard deviation was 2.54.

Make two valid comments about each set of driver speeds.

26. Calculate the size of the largest angle in the triangle below



27. For what range of values for p does the equation $y = 3x^2 + 6x + p$ have no real roots?

28. A diamond bracelet was valued at £2160 in 2018. Its value started to increase by 6% each year for the next 4 years.

Calculate its value after 4 years.