



Enlarge the triangle by scale factor -2 , using centre of enlargement $(0, 6)$

The first term of a geometric progression is 6 and the fourth term is 48.

$$6 \quad \underline{12} \quad \underline{24} \quad 48$$

Find the 2nd and 3rd terms.

The time taken, t , for passengers to be checked-in for a flight is inversely proportional to the square of the number of staff, s , working.

It takes 30 minutes passengers to be checked-in when 10 staff are working.

Find an equation connecting t and s .

$$t \propto \frac{1}{s^2} \quad k = 3000$$

$$t = \frac{k}{s^2}$$

$$30 = \frac{k}{10^2}$$

$$30 = \frac{k}{100}$$

$$t = \frac{3000}{s^2}$$

Solve using the quadratic formula, to 1 decimal place.

$$3x^2 + 11x + 9 = 0$$

$$a = 3 \quad b = 11 \quad c = 9$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-11 \pm \sqrt{121 - 108}}{6}$$

$$x = -1.2 \quad \text{or} \quad x = -2.4$$

A fair six sided dice is rolled three times.

Find the probability of getting exactly two sixes.

$$66N \quad \frac{1}{6} \times \frac{1}{6} \times \frac{5}{6}$$

$$6N6 \quad \frac{1}{6} \times \frac{5}{6} \times \frac{1}{6}$$

$$N66 \quad \frac{5}{6} \times \frac{1}{6} \times \frac{1}{6}$$

$$\frac{15}{216} = \frac{5}{72}$$