

Starter

1. Expand the brackets and simplify

a. $4 - 3(x - 5)(x + 6)$

b. $(2r - 5)(r + 2)(r - 2)$

2. Roy bought a new Taylor-Made driver for £249.99.7

He then traded it in to American Golf for £140.

Express his loss as a percentage of the original price.

3. Solve each linear inequation below

a. $4p - 5 > 2p + 19$

b. $6 - 5t \leq 9t + 15$

4. Find the **perimeter** of a sector with an angle of 45° and a radius of 4cm.

Take $\pi = 3.14$

Starter

1. Simplify the following, writing your answer with a positive index.

a. $4q^{-5} \times 2q^3$

b. $6y^5 \div 3y^9$

c. $(-2f^2)^{-3}$

2. A shirt is reduced in price to £24.99.

If this represented a 35% reduction, how much was the shirt originally?

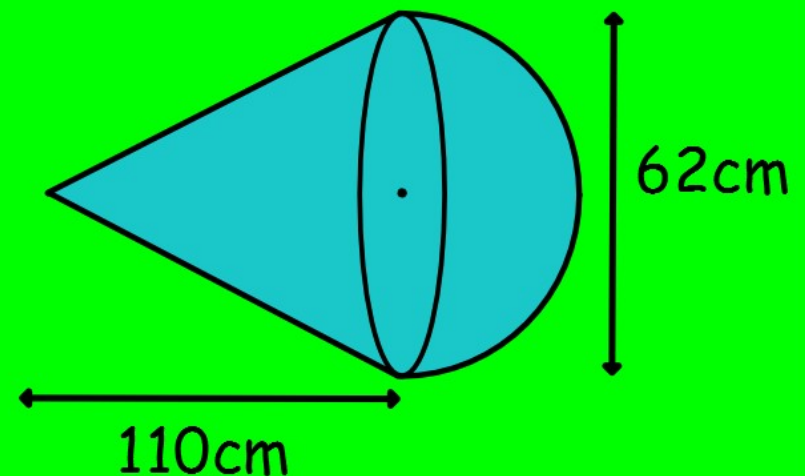
3. A straight line has equation $4y - 3x = 12$.

Find (i) the gradient

(ii) the y-intercept

(iii) the x-intercept

4. Find the volume of the composite shape shown opposite.



Starter

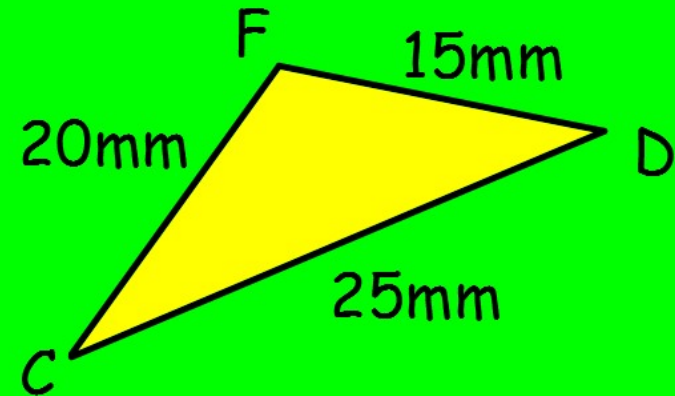
1. Simplify

a. $\sqrt{175}$

b. $\sqrt{20} + \sqrt{80}$

c. $9\sqrt{3} - \sqrt{192}$

2. Show that the triangle opposite is right angled at F.



3. Factorise

a. $x^2 - 3x - 4$

b. $2p^2 + p - 6$

c. $15k^2 + 42k - 9$

4. Simplify the following, writing your answer with a positive index.

$$\frac{(k^3)^2 \times k^{-8}}{k^4}$$

Starter

1. Expand the brackets and simplify

a. $4(p - 8)(3p + 1)$

b. $3 - 6(j - 4)(j + 7)$

2. Find the equation of the line which is parallel to $x - 4y + 5 = 0$ and which passes through the point $(-2, 7)$.

3. Write $x^2 - 3x - 3$ in the form $(x + a)^2 + b$, clearly stating the values of a and b .

4. Find the height, h , of the tunnel shown opposite given that the radius of the tunnel is 2.1m.

