



A circle has area  $40\text{cm}^2$ .

Find the diameter.

$$\pi r^2 = 40$$

$$r^2 = 12.73\dots$$

$$r = 3.568\dots$$

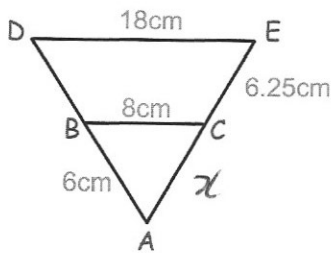
$$d = 7.136\dots \text{ cm}$$

Show that an increase of 10% followed by an increase of 10% is equivalent to a 21% increase overall.

$$100 \xrightarrow{+10\%} 110 \xrightarrow{+10\%} 121$$

21% increase

Not drawn accurately



$$18 \div 8 = 2.25$$

Triangle ABC is similar to triangle ADE.

Work out the length of AC.

$$x \times 2.25 = x + 6.25$$

$$2.25x = x + 6.25$$

$$1.25x = 6.25$$

$$x = 5 \text{ cm}$$

Solve

$$\frac{w}{4} = 35 - w$$

$$w = 140 - 4w$$

$$5w = 140$$

$$w = 28$$

$w$  is greater than 1.

Write in order, from smallest to largest

$$w^{-2}, \frac{w^3}{w^4}, w^0, w^3$$

$$w^0$$

$$w^3$$

$$\frac{w^3}{w^4}$$

$$w^{-2}$$