



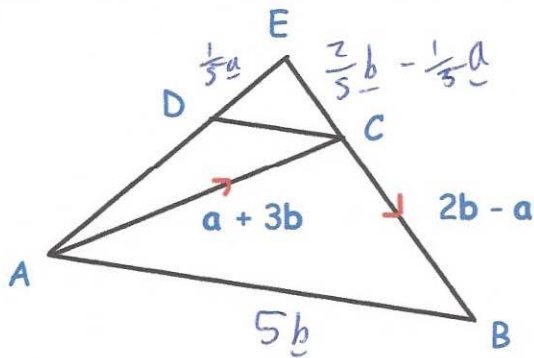
14th January

Find the value of

$$32^{2/5} \quad \sqrt[5]{32} = 2$$

$$2^2 = 4$$

4



Find the vector

$$\vec{AB} = \vec{AC} + \vec{CB}$$

$$= \underline{a} + 3\underline{b} + 2\underline{b} - \underline{a}$$

$$= 5\underline{b}$$

$$\vec{EC} = \frac{1}{5} \vec{CB}$$

$$\vec{DE} = \frac{1}{5} \vec{a}$$

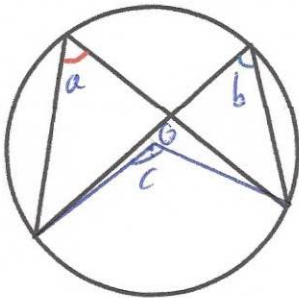
Prove DC is parallel to AB

$$\vec{DC} = \vec{DE} + \vec{EC}$$

$$= \frac{1}{5} \underline{a} + \frac{2}{5} \underline{b} - \frac{1}{5} \underline{a}$$

$$= \frac{2}{5} \underline{b}$$

$$\vec{AB} = 12.5 \vec{DC} \quad \therefore \text{parallel}$$



Prove the angles in the same segment are equal.

$$c = 2a \quad c = 2b$$

$\therefore$  as angle at centre is twice the angle at the circumference

$$2a = 2b$$

$$a = b$$

Write

$$\frac{4}{\sqrt{5}} - \sqrt{2\frac{2}{9}}$$

$$\frac{4}{\sqrt{5}} - \sqrt{\frac{20}{9}}$$

$$\frac{4}{\sqrt{5}} - \frac{\sqrt{20}}{3}$$

$$\frac{4\sqrt{5}}{5} - \frac{\sqrt{20}}{3}$$

in the form  $k\sqrt{5}$

$$\frac{4}{5} \sqrt{5} - \frac{2\sqrt{5}}{3}$$

$$\frac{2}{15} \sqrt{5}$$