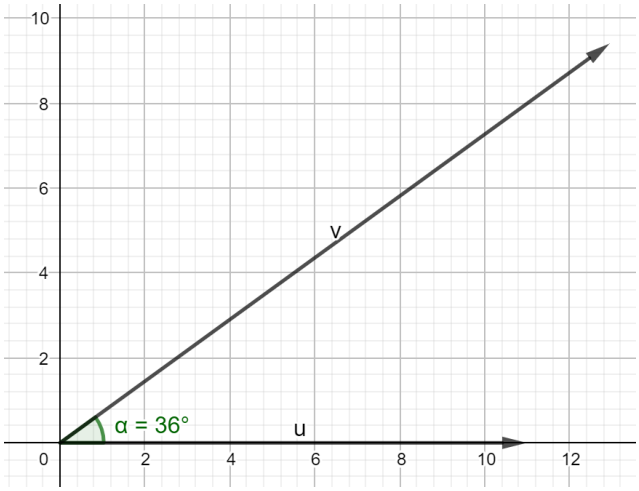
	Navn:		Skole:	
	Klasse: 20		Dato: 10. september 2021	Fag: Matematik A

Opgave 439



$$a = \vec{u} = 11$$
$$b = \vec{v} = 16$$
$$v = 36$$
$$v_1 = 180 - 36 = 144$$

$$|\vec{u} + \vec{v}| = \sqrt{a^2 + b^2 - 2 \cdot a \cdot b \cdot \cos(v_1)}$$
$$|\vec{u} + \vec{v}| = \sqrt{11^2 + 16^2 - 2 \cdot 11 \cdot 16 \cdot \cos(144)}$$
$$|\vec{u} + \vec{v}| = \sqrt{121 + 256 + 284.77}$$
$$|\vec{u} + \vec{v}| = \sqrt{661.77}$$
$$|\vec{u} + \vec{v}| = 25.7$$

$$|\vec{u} - \vec{v}| = \sqrt{a^2 + b^2 - 2 \cdot a \cdot b \cdot \cos(v)}$$
$$|\vec{u} - \vec{v}| = \sqrt{11^2 + 16^2 - 2 \cdot 11 \cdot 16 \cdot \cos(36)}$$
$$|\vec{u} - \vec{v}| = \sqrt{121 + 256 - 284.77}$$
$$|\vec{u} - \vec{v}| = \sqrt{92.23}$$
$$|\vec{u} - \vec{v}| = 9.60$$