	Navn:		Skole:	
	Klasse: 20		Dato: 22. februar 2022	Fag: Matematik A

Opgave 297

$$f(t) = 2 \cdot \sin(2t - 1)$$

$$\omega = 2$$

Opgave A

$$T = \frac{2\pi}{\omega}$$
$$T = \frac{2\pi}{2} = \pi \approx 3{,}141593$$

Opgave B

$$Maks = 2$$

$$2 = 2 \cdot \sin(2t - 1)$$
$$\frac{2}{2} = \sin(2t - 1) \qquad Divider\ med\ 2$$
$$1 = \sin(2t - 1) \qquad Reducer$$
$$\sin^{-1}(1) = 2t - 1 \quad Sin^{-1}\ på\ begge\ sider$$
$$\sin^{-1}(1) + 1 = 2t \quad Flyt - 1$$
$$\frac{\sin^{-1}(1) + 1}{2} = t \quad Divider\ med\ 2$$
$$t = \frac{\sin^{-1}(1) + 1}{2} \quad Byt\ sider$$
$$t = 1{,}285398 \qquad Udregn$$

Opgave C

$$Min = -2$$

$$-2 = 2 \cdot \sin(2t - 1)$$
$$\frac{-2}{2} = \sin(2t - 1) \qquad Divider\ med\ 2$$
$$-1 = \sin(2t - 1) \qquad Reducer$$
$$\sin^{-1}(-1) = 2t - 1 \quad Sin^{-1}\ på\ begge\ sider$$
$$\sin^{-1}(-1) + 1 = 2t \quad Flyt - 1$$
$$\frac{\sin^{-1}(-1) + 1}{2} = t \quad Divider\ med\ 2$$
$$t = \frac{\sin^{-1}(-1) + 1}{2} = -\frac{\pi - 2}{4} \approx -0{,}2853982$$