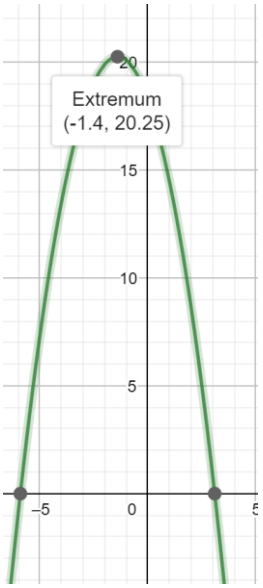
	Navn:		Skole:	
	Klasse: 20		Dato: 7. januar 2022	Fag: Matematik A

Opgave 252

$$a\colon -x^2 - 2.8x + 18.29$$
$$b\colon 3x^2 - 24x + 45$$
$$c\colon -2x^2 + 4x + 10.5$$

Funktion A



$$a = -1$$
$$b = -2.8$$
$$c = 18.29$$

$$D = b^2 - 4ac$$
$$D = (-2.8)^2 - 4 \cdot -1 \cdot 18.29$$
$$D = 81$$

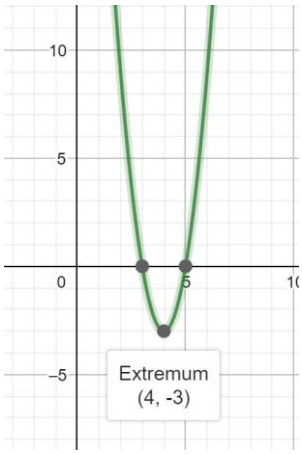
$$T\left(-\frac{b}{2a}, -\frac{d}{4a}\right)$$
$$T\left(-\frac{-2.8}{2 \cdot (-1)}, -\frac{81}{4 \cdot (-1)}\right)$$
$$T(-1{,}4; 20{,}25)$$

$$x_{1,2} = \frac{-b \pm \sqrt{D}}{2a}$$

$$x_1 = \frac{-(-2.8) + \sqrt{81}}{2 \cdot (-1)}$$
$$x_1 = -5{,}9$$

$$x_2 = \frac{-(-2.8) - \sqrt{81}}{2 \cdot (-1)}$$
$$x_2 = 3{,}1$$

Funktion B



$$a = 3$$
$$b = -24$$
$$c = 45$$

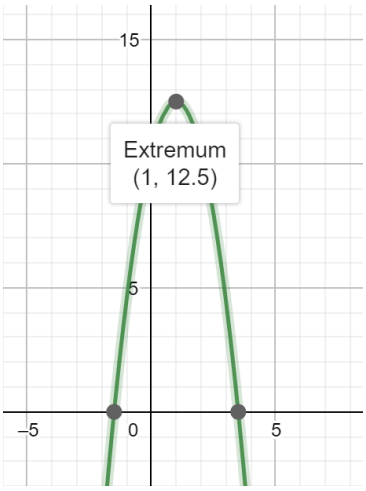
$$D = b^2 - 4ac$$
$$D = (-24)^2 - 4 \cdot 3 \cdot 45$$
$$D = 36$$

$$T\left(-\frac{-24}{2 \cdot 3}, -\frac{36}{4 \cdot 3}\right)$$
$$T(4; -3)$$

$$x_1 = \frac{-(-24) + \sqrt{36}}{2 \cdot 3}$$
$$x_1 = 5$$

$$x_2 = \frac{-(-24) - \sqrt{36}}{2 \cdot 3}$$
$$x_2 = 3$$

Funktion C



$$a = -2$$
$$b = 4$$
$$c = 10.5$$

$$D = b^2 - 4ac$$
$$D = 4^2 - 4 \cdot -2 \cdot 10.5$$
$$D = 100$$

$$T\left(-\frac{b}{2a}, -\frac{d}{4a}\right)$$
$$T\left(-\frac{4}{2 \cdot (-2)}, -\frac{100}{4 \cdot (-2)}\right)$$
$$T(1; 12{,}5)$$

$$x_1 = \frac{-4 + \sqrt{100}}{2 \cdot (-2)}$$
$$x_1 = -1{,}5$$

$$x_2 = \frac{-4 - \sqrt{100}}{2 \cdot (-2)}$$
$$x_2 = 3{,}5$$