

SOLUZIONE

**DELL'ESAME DI AMMISSIONE
PER L'ANNO SCOLASTICO
2015/2016**

SOLUZIONI

ESERCIZIO 1

$$a) 3^{40} : [3^8 \cdot 3^5 : 3^4] = 3^{40} : 3^9 = 3^{31}$$

$$b) \frac{11}{12} + \frac{11}{2} \cdot \frac{2}{11} - \frac{35}{12} = -\frac{12}{12} = -1$$

$$c) \left[\left(-\frac{1}{4} \right)^2 : \frac{11}{12} \right] + 1 = \frac{1}{16} : \frac{11}{12} + 1 = \frac{3}{44} + 1 = \frac{47}{44}$$

ESERCIZIO 2

$$a) 2x + 2 + 5 = 7x - 2x - 6$$

$$2x + 7 = 5x - 6$$

$$3x = 13$$

$$x = \frac{13}{3}$$

$$S = \left\{ \frac{13}{3} \right\}$$

$$b) 3x + 9 - 4 + 2x = 3x + 9 - 18$$

$$2x = -14$$

$$x = -7$$

$$S = \{-7\}$$

$$c) 9 - 9x^2 - 14 - 9x + 72 = -9x^2 - 9x$$

$$67 = 0$$

Impossibile

$$S = \emptyset$$

ESERCIZIO 3

$$a) x = \frac{1500 \cdot 600}{900} = 1000 \text{ kg}$$

$$b) x = \frac{4000 \cdot 900}{1500} = 2400$$

$$c) x = \frac{80 \cdot 8}{32} = 20 \text{ kg}$$

ESERCIZIO 4

$$a) \frac{1}{3}x = 19000 \quad x = 57000$$

$$b) 57000 - 19000 = 38000; \quad 38000 \cdot 5\% = 1900; \quad 38000 - 1900 = 36100 \\ 19000 + 36100 = 55100$$

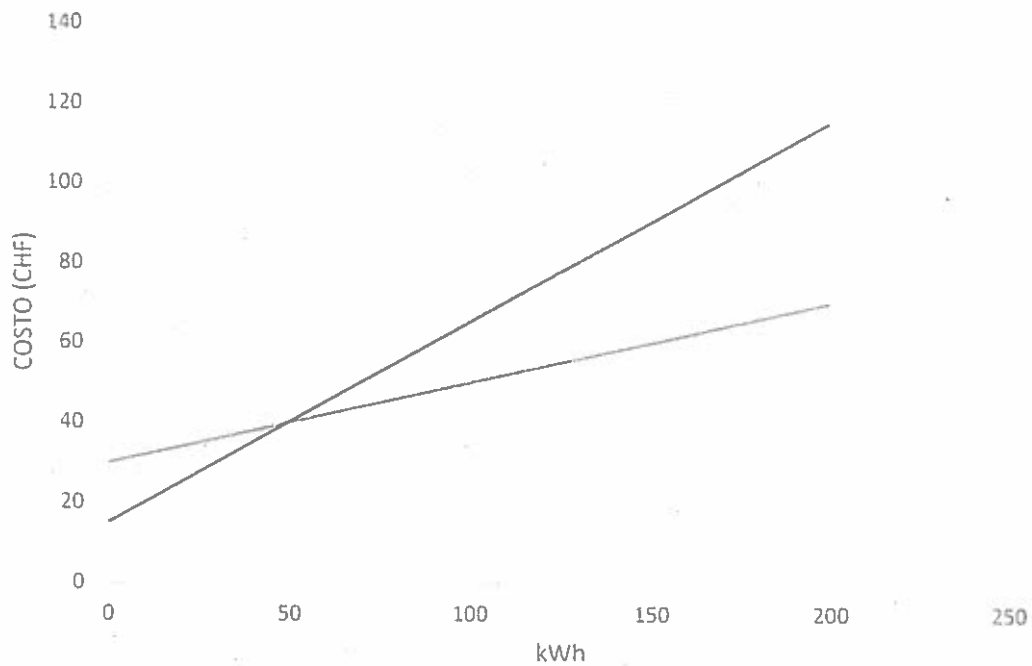
ESERCIZIO 5

a) $30 + 0,20 \cdot 20 = 34$; $65 = 15 + 0,5x \rightarrow x = \frac{50}{0,5} = 100$; $15 + 0,5 \cdot 200 = 115$

b) Completare la tabella:

kWh (x)	0	20	100	200	y = ?
Costo AET (CHF) (y)	30	34	50	70	$y = 30 + 0,20x$
Costo SES (CHF) (y)	15	25	65	115	$y = 15 + 0,5x$

c)



d) $30 + 0,20x = 15 + 0,5x \rightarrow x = 50 \text{ kWh}$

e) $60 = 30 + 0,20x \rightarrow x = 150 \text{ kWh}$

$60 = 15 + 0,5x \rightarrow x = 90 \text{ kWh}$

E' più conveniente l'offerta AET.

f) $y = 30 + 0,20 \cdot 30 = 36 \text{ CHF}$

$y = 15 + 0,5 \cdot 30 = 30 \text{ CHF}$

E' più conveniente l'offerta SES.