



Persönliche Daten

Nachname: \_\_\_\_\_

Vorname: \_\_\_\_\_

Unterschrift: \_\_\_\_\_

geprüft

Matrikelnummer

\_\_\_\_\_

0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
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4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4
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8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9

In diesem Feld dürfen **keine** Veränderungen der Daten vorgenommen werden!

**Scrambling**  
 0  0

Belegart  Klausur-ID

Bitte sorgsam ankreuzen:  Nicht angekreuzt:  oder

Dieser Beleg wird maschinell gelesen. Bitte nicht falten, nicht knicken und nicht beschmutzen. Verwenden Sie zum Markieren einen **blauen oder schwarzen Kugelschreiber**.

**Nur deutlich erkennbare und positionsgenaue Markierungen werden ausgewertet!**

Antworten 1 - 3

	a	b	c	d	e
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	a	b	c	d	e





1. What is the derivative of  $f(x) = x^9 e^{3.8x}$ , evaluated at  $x = 0.72$ ?
  - (a) 10.83
  - (b) 10.03
  - (c) 13.07
  - (d) 16.26
  - (e) 9.83
  
2. A machine fills milk into 1000ml packages. It is suspected that the machine is not working correctly and that the amount of milk filled differs from the setpoint  $\mu_0 = 1000$ . A sample of 237 packages filled by the machine are collected. The sample mean  $\bar{y}$  is equal to 934.2 and the sample variance  $s_{n-1}^2$  is equal to 1620.77.

Test the hypothesis that the amount filled corresponds on average to the setpoint. What is the value of the  $t$  test statistic?

  - (a)  $-58.452$
  - (b) 48.048
  - (c) 26.393
  - (d) 63.801
  - (e)  $-25.162$
  
3. What is the seat of the federal authorities in Switzerland (i.e., the de facto capital)?
  - (a) Zurich
  - (b) Lausanne
  - (c) Bern
  - (d) Geneva
  - (e) Basel



