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!B @ 0 = 8 F 0 1/4

(0 D @ 0 => 2 < 8 = 7 C E 0 @ - **Crocus sativus**

gradinar, = 5 4 5 ; O 05 0 ? @ 8 ; 2009 - 14:47:19

(0 D @ 0 => 2 8 O < 8 = 7 C E 0 @ (*Crocus sativus*) 5 : C ; B C @ 5 = 2 8 4 < 8 = 7 C E 0 @ > B
A 5 < 5 9 A B 2 > 5 @ C = 8 : > 2 8 (*Iridaceae*). " @ 8 B 5 1 ; 8 7 0 ; F 0 = 0 F 2 5 B 0

(4 8 A B 0 ; = 8 B 5 : @ 0 8 1 0 = 0 ? 5 A B 8 F 8 B 5 6 5 = A : 8 B 5
@ 5 ? @ > 4 C : B 8 2 = 8 > @ 3 0 = 8 = 0 @ 0 A B 5 = 8 5 B >) 8 G 0 A B > B H 8 9 : 0 B 0 < C
(A B J 1 ; >, A 2 J @ 7 2 0 I > 1 ; 8 7 0 ; F 0 B 0 A > A B 0 = 0 ; 0 B 0 G 0 A B > B
@ 0 A B 5 = 8 5 B >) A 5 8 7 A C H 0 2 0 B 8 A 5 8 7 ? > ; 7 2 0 B 2 3 > B 2 0 @ A B 2 > B >
: 0 B > ? > 4 ? @ 0 2 : 0 8 > F 2 5 B 8 B 5 ; .

(0 D @ 0 = J B, : > 9 B > > B 3 > 4 8 = 8 5 = 0 9 - A : J ? 0 B 0 2 A 2 5 B 0 ? > 4 ? @ 0 2 : 0
? > B 5 3 ; >, @ 0 A B 5 ? @ 8 5 A B 5 A B 2 5 = 8 C A ; > 2 8 O 2 . 3 > 7 0 ? 0 4 = 0 7 8 O.
C ; B 8 2 8 @ 0 = 5 7 0 ? J @ 2 8 ? J B 2 @ 0 9 > = 0 = 0 J @ F 8 O.

& 2 5 B > 2 5 B 5 < C A 0 A ; 8 ; 0 2 F 2 O B 8 A D > @ < 0 = 0 7 2 5 7 4 0. @ 5 7
=> I B 0 A 5 @ 0 7 B 2 0 @ O B. 5 ; 8 : 0 B = 8 B 5 < C F 2 5 B G 5 B 0 A 5 1 5 @ 0 B
@ J G = >, 0 1 ; 8 7 0 ; F 0 B 0 A 5 8 7 A C H 0 2 0 B. 5 > 1 E > 4 8 < 8 A 0 ? > 2 5 G 5
> B 1 5 0 0 0 0 @ 0 A B 5 = 8 O 7 0 ? > ; C G 0 2 0 = 5 B > = 0 1 : 3 H 0 D @ 0 = , : > 5 B > 3 >
? @ 0 2 8 = 0 9 - A : J ? 0 B 0 ? > 4 ? @ 0 2 : 0 2 A 2 5 B 0. 0 B > 2 0 ? J : A 0 < > ¼ G. ;.
H 0 D @ 0 = 5 4 > A B 0 B J G = 0 4 0 ? @ 8 4 0 4 5 2 : C A 8 0 @ > < 0 B = 0 O A B 8 5 7 0 6
4 C H 8.

C < 0 B 0 H 0 D @ 0 = ? @ > 8 7 ; 8 7 0 > B A B 0 @ > D @ 5 = A : 8 O B 5 @ < 8 = > B
1 2 2 5 : safran , : > 9 B > 8 4 2 0 > B ; 0 B 8 = A : > B > safranum . Safranum 5
A 2 J @ 7 0 = > A J I > A 8 B 0 ; 8 0 = A : > B > zafferano 8 8 A ? 0 = A : > B >
azafrán . Safranum 8 4 2 0 > B 0 @ 0 1 A : 0 B 0 4 C < 0 asfar , : > O B >
> 7 = 0 G 0 2 0 6 J ; B G @ 5 7 ? 0 @ > = 8 < = > B > za faran , 8 < 5 B > = 0
? > 4 ? @ 0 2 : 0 B 0 = 0 0 @ 0 1 A : 8.

A B > @ 8 O:

A B > @ 8 O B 0 = 0 > B 3 ; 5 6 4 0 = 5 B > = 0 H 0 D @ 0 = A B 8 3 0 = 0 4 3 0 0 0 3 > 4 8 = 8
2 < 8 = 0 ; > B >. 8 2 8 O B ? @ 5 4 H 5 A B 2 5 = 8 : = 0 ? 8 B > < = 8 O H 0 D @ 0 = > 2
< 8 = 7 C E 0 @ 5 5 4 8 = 2 8 4 5 A 5 = 5 = < 8 = 7 C E 0 @ *Crocus cartwrightianus*.
B 3 ; 5 6 4 0 1 8 B 5 3 > E > @ 0 @ 0 7 2 J 6 4 0 ; 8 4 8 2 8 5 : 7 5 < ? ; O @ 8,
> B 1 8 @ 0 9 : 8 B 5 7 8 A = 5 > 1 8 G 0 9 = > 4 J ; 3 8 1 ; 8 7 0 ; F 0. " 0 : 0 5 4 = 0
A B 5 @ 8 ; = 0 < C B 0 = B = 0 D > @ < 0 = 0 C. *cartwrightianus*, *C. sativus* 1 8 ; 0 A J 7 4 0 4 5 = 0
2 : J A = 0 B 0 @ > = 7 > 2 0 5 ? > E 0 2 @ 8 B. : A ? 5 @ B 8 B 5 A < O B 0 B, G 5
H 0 D @ 0 = 5 4 > : C < 5 = B 8 @ 0 = 7 0 ? J @ 2 8 ? J B 2 5 4 8 = 0 A 8 @ 8 9 A : 8
1 > B 0 = 8 G 5 A : 8 A ? @ 0 2 > G = 8 : > B 7 2 5 : ? @ . = . 5 ., A J 7 4 0 4 5 = ? @ 8
F 0 @ C 2 0 = 5 B > = 0 H C @ 1 0 = 8 ? 0 ; 0 < 5 @ 5 = 0 5 4 > : C < 5 = B 0 F 8 O 7 0

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!B @ 0 = 8 F 0 2 / 4

8 7 ? >; 7 2 0 = 5 B > = 0 H 0 D @ 0 = 7 0 ; 5 : C 2 0 = 5 = 0 > : >; > 9 0 1 >; 5 A B 8 2
? 5 @ 8 > 4 > B 4 0 0 0 3 > 4 8 = 8. (0 D @ 0 = J B 5 8 7 ? >; 7 2 0 = : 0 B > ? > 4 ? @ 0 2 : 0
8 ; 5 : 0 @ A B 2 > 2 ! @ 5 4 8 7 5 < = > < > @ 8 5 B > > B B > 3 0 2 0, : 0 B >
8 7 ? >; 7 2 0 = 5 B > 8 > B 3 ; 5 6 4 0 = 5 B > 1 0 2 = > A 0 A 5
@ 0 7 ? @ > A B @ 0 = O 2 0 ; 8 : J < 4 @ C 3 8 G 0 A B 8 = 0 2 @ 0 7 8 O, : 0 : B > 8 : J <
! 5 2 5 @ = 0 D @ 8 : 0 8 ! 5 2 @ 5 = 0 < 5 @ 8 : 0. @ 5 7 ? > A ; 5 4 = 8 B 5
= O : >; : > 4 5 A 5 B 8 ; 5 B 8 O > B 3 ; 5 6 4 0 = 5 B > = 0 H 0 D @ 0 = 4 > A B 8 3 0 8
: 5 0 = 8 O.

J @ F 8 O 8 @ 5 2 5 = 8 <. 8 = > 9 F 8 B 5 A 0 > 1 @ 8 A C 2 0 ; 8 H 0 D @ 0 = 0 2 4 2 > @ F > 2 8 D @ 5 A : 8
> : > 1 5 0 0 1 6 0 0 3. ? @ . = . 5, ? @ 5 4 A B 0 2 O 9 : 8 C ? > B @ 5 1 0 B 0 < C : 0 B >
; 5 : 0 @ A B 2 >. > - J A = > 3 @ J F : 8 B 5 ; 5 3 5 = 4 8 @ 0 7 : 0 7 2 0 B 7 0
< > @ A : 8 ? J B 5 H 5 A B 2 8 O 4 > 8 ; 8 : 8 O. " 0 < ? J B 5 H 5 A B 2 5 = 8 F 8 B 5 A 5
= 0 4 O 2 0 ; 8 4 0 A 5 A 4 > 1 8 O B A B > 2 0, 7 0 : > 5 B > A < O B 0 ; 8, G 5 5
= 0 9 - F 5 = = 8 O B H 0 D @ 0 = 2 A 2 5 B 0. @ C 3 0 ; 5 3 5 = 4 0 @ 0 7 : 0 7 2 0 7 0
@ > : C A 8 ! < 8 ; 0 : A 7 0 B > 2 0, : 0 : @ > : C A 5 > < 0 3 L > A 0 = 8
? @ 5 2 J @ = 0 B 2 ? J @ 2 8 O H 0 D @ 0 = > 2 < 8 = 7 C E 0 @. @ 5 2 = 8 B 5
A @ 5 4 8 7 5 < = > < > @ A : 8 = 0 @ > 4 8, A @ 5 4 : > 8 B > 5 3 8 ? 5 B A : 8 B 5
? 0 @ D N < 5 @ 8 A B 8, ; 5 : 0 @ 8 B 5 > B 0 7 0, 3 @ 0 6 4 0 = 8 B 5 = 0 > 4 > A 8
3 @ J F : 8 B 5 : C @ B 8 7 0 = : 8 - E 5 B 5 @ 8 8 7 ? >; 7 2 0 ; 8 H 0 D @ 0 = 2 A 2 > 8 B 5
? 0 @ D N < 8, < 0 7 8 ; 0, ? C B ? C @ 8, 3 @ 8 < > 2 5, 6 5 @ B 2 > ? @ 8 = > H 5 = 8 O 8
; 5 G 5 = 8 O.
: J A = 8 O 5 ; 8 = 8 A B 8 G 5 = 3 8 ? 5 B ; 5 > ? 0 B @ 0 5 8 7 ? >; 7 2 0 ; 0
H 0 D @ 0 = ? @ 8 : J ? 0 = 5, 7 0 4 0 4 > A B 0 2 O ? > - 3 >; O < > C 4 > 2 >; A B 2 8 5
? @ 8 ; N 1 5 = 5. 3 8 ? 5 B A : 8 B 5 7 = 0 E 0 @ 8 A 0 8 7 ? >; 7 2 0 ; 8 H 0 D @ 0 = 7 0
; 5 : C 2 0 = 5 = 0 2 A 8 G : 8 @ 0 7 = > 2 8 4 = > A B 8 A B > < 0 H = > - G @ 5 2 = 8
> ? ; 0 : 2 0 = 8 O. (0 D @ 0 = J B 5 8 7 ? >; 7 2 0 = 8 7 0 1 > O 4 8 A 2 0 = 5 = 0
B J : 0 = 8 2 ; 5 2 0 = B 8 = A : 8 3 @ 0 4 > 2 5 : 0 B > ! 8 4 > = 8 " 8 @. 8 < A : 8 O B
C G 5 = 2 J; > @ = 8 ; 8 9 & 5 ; A ? @ 5 4 ? 8 A 2 0 H 0 D @ 0 = 2 ; 5 : 0 @ A B 2 0 7 0
@ 0 = 8, : 0 H ; 8 F 0, : >; 8 : 8 8 : @ 0 A B 0. 8 <; O = 8 B 5 B >; : > 2 0 > 1 8 G 0 ; 8
H 0 D @ 0 = 0, G 5 @ 8 < A : 8 B 5 : >; > = 8 7 0 B > @ 8 A 8 4 > = 5 A ; 8 H 0 D @ 0 =,
: > 3 0 B > A 5 7 0 A 5 ; 8 ; 8 2 N 6 = 0 0 ; 8 O, : J 4 5 B > 3 > > B 3 ; 5 6 4 0 ; 8
H 8 @ > : > 4 > ? 0 4 0 = 5 B > = 0 8 < ? @ 5 7 2 7 1 3. ! J ? 5 @ = 8 G 5 1 8 A 8
B 5 > @ 8 8 7 0 O 2 0 2 0 B, G 5 H 0 D @ 0 = J B A 5 2 @ J I 0 2 J 2 \$ @ 0 = F 8 O 5 4 2 0
? @ 5 7 8 2 5 : A < 0 2 @ 8 B 5 8 ; 8 A ? 0 ? A B 2 > B > 2 2 8 = L > = ? @ 5 7 1 4 2 5 ..

! > @ B > 2 5:

> A 2 5 B 0 A 5 > B 3 ; 5 6 4 0 B = O : >; : > A > @ B 0 H 0 D @ 0 =. A ? 0 = 8 O,
> A = > 2 5 = 8 7 = > A 8 B 5 ; = 0 H 0 D @ 0 =, ? > ? @ 8 = F 8 ? ? @ > 8 7 2 5 6 4 0
< 5 : 8 @ 0 7 = > 2 8 4 = > A B 8 A = 5 B >; : > 2 0 O @ J : F 2 O B, 2 : C A 8 0 @ > < 0 B.
A ? 0 = A : 8 @ 0 7 = > 2 8 4 = > A B 8 A 0 B 5 7 8 A B J @ 3 > 2 A : 8
= 0 8 < 5 = > 2 0 = 8 O Spanish Superior 8 Creme 8 B 5 A 5 > : 0 G 5 A B 2 0 2 0 B
A ? > @ 5 4 ? @ 0 2 8 B 5 ; A B 2 5 = 8 < 8 = 8 < 0 ; = 8 A B 0 = 4 0 @ B 8. > 2 5 G 5 B >
8 B 0 ; 8 0 = A : 8 H 0 D @ 0 = 5 ? > - A 8 ; 5 = 2 B 5 7 8 E 0 @ 0 : B 5 @ 8 A B 8 : 8.
3 @ > < = 0 B 0 G 0 A B > B = 0 9 - A 8 ; = 8 B 5 8 F 5 = = 8 @ 0 7 = > 2 8 4 = > A B 8 2
A 2 5 B 0 > 1 0 G 5 8 4 2 0 B > B @ J F : 0 0 : 5 4 > = 8 O, @ 0 = 8 0 H < 8 @.
! J 5 4 8 = 5 = 8 B 5 1 0 B 8 = 0 ? @ 8 < 5 @ A 0 7 0 1 @ 0 = 8 ; 8 2 = > A 0 = 0

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!B @ 0 = 8 F 0 3/4

8 @ 0 = A : 8 H 0 D @ 0 =, 0 = 4 8 O 5 7 0 1 @ 0 = 8 ; 0 8 7 => A 0 = 0
2 8 A > : > 0 G 5 A B 2 5 = H 0 D @ 0 = 2 G C 6 1 8 = 0. A 2 5 = B > 2 0, > B < 5 A B 0
: 0 B > > 2 0 5 ; 0 = 4 8 O, \$ @ 0 = F 8 O, (2 5 9 F 0 @ 8 O, = 3 ; 8 O 8
! J 5 4 8 = 5 = 8 B 5 1 0 B 8 8 4 2 0 B @ 0 7 ; 8 G = 8 1 C B 8 : > 2 8 : C ; B C @ 8.
! J 5 4 8 = 5 = 8 B 5 1 0 B 8 = 0 ? @ 8 < 5 @ ? 5 = A 8 ; 2 0 = A : > - = 5 < A : 8 O B
H 0 D @ 0 =, : > 9 B > 5 8 7 2 5 A B 5 = A J A 7 5 < = 8 B 5 > B B 5 = J F 8 2 0 @ > < 0 B 0
8 2 : C A 0 A 8, A 5 ? @ > 8 7 2 5 6 4 0 2 > B => A 8 B 5 ; = > < 0 ; : 8 : > ; 8 G 5 A B 2 0.

< 0 8 = O : > : > H 8 @ > : > A < O B 0 = 8 > B ? > B @ 5 1 8 B 5 ; 8 B 5 7 0
2 8 A > : > 0 G 5 A B 2 5 = 8 B 8 ? > 2 5 H 0 D @ 0 =. 0 ? @ 8 < 5 @ 0 : 8 ; A : 8 O B
H 0 D @ 0 = (8 B 0 ; 8 0 = A : 8 zafferano del L'Aquila) A 5 > B 3 ; 5 6 4 0 2 @ 0 9 > = 0 1 @ C F >
2 4 > ; 8 = 0 B 0 > : > ; > 3 @ 0 4 G 5 B > 0 2 5 ; 8. " 0 < H 0 D @ 0 = A 5
> B 3 ; 5 6 4 0 = 0 > : > ; > 8 E 5 : B 0 @ 0 ? ; > I. > = 0 A B > O 1 5 < B > 2 0 5
5 4 8 = A B 2 5 => B > < O A B > 2 A 2 5 B 0, : J 4 5 B > 3 > > B 3 ; 5 6 4 0 B. " > 9 A 5
> B ; 8 G 0 2 0 A D > @ < 0 B 0 8 F 2 5 B 0 = 0 1 ; 8 7 0 ; F 0 B 0 8 ? 5 A B 8 F 8 B 5 A 8 8 A
2 8 A > 8 : > B > A J 4 J @ 6 0 = 8 5 = 0 H 0 D @ 0 = 0 ;. " 5 4 0 2 0 B = 0 0 : 8 ; A : 8 O
H 0 D @ 0 = = 5 > 1 8 G 0 9 => > A B J @ 0 @ > < 0 B. A 2 5 = B > 2 0, 2 8 A > : > B >
A J 4 J @ 6 0 = 8 5 = 0 : @ > F 8 = 7 0 A 8 ; 2 0 < = > 3 > > F 2 5 B 0 2 0 1 0 B 0 < C
A ? > A > 1 = > A B. : 8 ; A : 8 O B H 0 D @ 0 = 5 4 > = 5 A 5 = 2 B 0 ; 8 O > B
A ? 0 = 8 O ? > 2 @ 5 < 5 B > = 0 8 = : 2 8 7 8 F 8 O B 0 > B 5 4 8 =
4 > < 8 = 8 : 0 = A : 8 < > = 0 E. ? > A ; 5 4 A B 2 8 5 4 > : @ 0 O = 0
! @ 5 4 = > 2 5 : > 2 8 5 B > 0 : 8 ; A : 8 O B H 0 D @ 0 = A B 0 2 0 5 4 8 = > B
= 0 9 - B J @ A 5 = 8 B 5 2 2 @ > ? 0 A > @ B > 2 5. > < 0 1 0 1 = > B >
> B 3 ; 5 6 4 0 = 5 = 0 H 0 D @ 0 = 7 0 : 0 G 5 A B 2 > 8 : > ; 8 G 5 A B 2 > 2 B 0 ; 8 O 5
2 ! 0 = 0 2 8 = > = @ 5 0 ; 5, ! 0 @ 4 8 = 8 O. " 0 < H 0 D @ 0 = A 5 > B 3 ; 5 6 4 0
= 0 4 0 E 5 : B 0 @ 0 (A J A B 0 2 ; O 2 0 9 : 8 6 0 % > B 8 B 0 ; 8 0 = A : > B >
? @ > 8 7 2 > 4 A B 2 >). " > 9 A J I > 8 < 0 < = > 3 > 2 8 A > : > A J 4 J @ 6 0 = 8 5
= 0 : @ > F 8 =, ? 8 : @ > : @ > F 8 = 8 H 0 D @ 0 = 0 ;. @ C 3
2 8 A > : > 0 G 5 A B 2 5 = H 0 D @ 0 = 5 : 0 H < 8 @ A : 8 O B > = 3 @ 0 8 ; 8
0 G 0 (Crocus sativus Cashmirianus), : > 9 B > 8 7 2 J = = 4 8 O 5 = 0 9 - A : J ? 8
= 0 9 - B @ C 4 5 = 7 0 = 0 < 8 @ 0 = 5. " > 2 0 5 7 0 @ 0 4 8 ? > A B > O == 8 B 5 A C H 8,
1 > ; 5 A B 8 8 = 5 C A ? 5 H = 8 @ 5 : > ; B 8 2 0 H < 8 @, : > < 1 8 = 8 @ 0 = 8 A J A
7 0 1 @ 0 = 0 B 0 7 0 8 7 => A > B = 4 8 O. 0 H < 8 @ A : 8 O B H 0 D @ 0 = A 5
? > 7 = 0 2 0 ? > 8 7 2 J = @ 5 4 => B J < = 8 O A 8 ? C @ ? C @ 5 = F 2 O B, 5 4 8 = > B
= 0 9 - B J < = 8 B 5 2 A 2 5 B 0, : > 5 B > ? @ 5 4 ? > ; 0 3 0 A 8 ; = 8 O B < C 2 : C A,
0 @ > < 0 B 8 > F 2 5 B 8 B 5 ; = 8 A ? > A > 1 = > A B 8.

B 3 ; 5 6 4 0 = 5:
A ; > 2 8 O:
(0 D @ 0 = > 2 8 O B < 8 = 7 C E 0 @ 2 8 @ 5 5 2 : ; 8 < 0 B 8, 1 ; 8 7 : 8 4 >
A @ 5 4 8 7 5 < = > < > @ A : 8 B 5 H C 1 @ 0 F 8. ! ; 5 4 > 2 0 B 5 ; = > B > 9 2 8 @ 5 5 8 2
< 5 A B 0, ? > 4 > 1 = 8 = 0 A 5 2 5 @ > 0 < 5 @ 8 : 0 = A : 8 B 5 H C 1 @ 0 F 8, : J 4 5 B >
= 0 4 A C E 8 8 ? > ; C A C E 8 7 5 < 8 ? @ 5 7 ; O B > B > 4 C E 0 B B > ? ; 8 A C E 8
; 5 : 8 2 5 B @ > 2 5. J ? @ 5 : 8 B > 2 0 @ 0 A B 5 = 8 5 B > < > 6 5 4 0 ? > = 0 A O
A B C 4 5 = 8 7 8 < 8, 8 7 4 J @ 6 0 9 : 8 = 0 A B C 4 > 2 5 4 > - 1 0 ° C 8 : @ 0 B : 8
? 5 @ 8 > 4 8 = 0 A = 5 6 = 0 ? > : @ 8 2 : 0. : > = 5 A 5 > B 3 ; 5 6 4 0 2 < 5 A B 0 A
2 8 A > : 8 2 0 ; 5 6 8, H 0 D @ 0 = > 2 8 O B < 8 = 7 C E 0 @ A 5 = C 6 4 0 5 > B
= 0 ? > O 2 0 = 5. 0 H < 8 @ = 0 ? @ 8 < 5 @ 3 > 4 8 H = 8 B 5 2 0 ; 5 6 8 A 0

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!B @ 0 = 8 F 0 4/4

A @ 5 4 => 1000 1500 <<, B 0:0 G 5 :0 H <8 @ A:8 O B H 0 D @ 0 = A 5 > B 3; 5 6 4 0
1 5 7 = 0 ? > O 2 0 = 5 ? @ 8 => @ <0 ;= 8 2 0; 5 6 8. <=> 3 > ? >- A C E 8 B 5
@ 0 9 >= 8, : J 4 5 B > A 5 > B 3; 5 6 4 0 H 0 D @ 0 => 2 <8=7 C E 0 @
(= 0 ? @ 8 <5 @ 2 J @ F 8 O, : J 4 5 B > A @ 5 4 = 8 B 5 2 0; 5 6 8 A 0 5 0 0 <<, 8
A ? 0 = 8 O, : J 4 5 B > B 5 A 0 4 0 0 <<), 5 = 5 > 1 E > 4 8 <> = 0 ? > O 2 0 = 5.
(0 D @ 0 => 2 8 O B <8=7 C E 0 @ > 1 8 G 0 ? @ >; 5 B = 8 B 5 4 J 6 4 > 2 5,
? > A; 5 4 2 0 = 8 > B A @ 0 2 = 8 B 5; => A C E 8 ; 5 B 0. J 6 4 > 2 5 B 5, ? 0 4 0 1 8
= 5 ? > A @ 5 4 A B 2 5 => ? @ 5 4 8 F J D B 5 = 5 B > > 1 0 G 5 => A O B 2 8 A > : 8
4 > 1 8 2 8. B 4 @ C 3 0 A B @ 0 = 0, 4 J 6 4 J B 8; 8 A B C 4 5 => B > 2 @ 5 < 5 ? >
2 @ 5 < 5 = 0 F J D B 5 = 5 4 > ? @ 8 = 0 A O B 7 0 1 >; 5 A B 8. > A B > O == 0 B 0
2; 0 3 0 8 3 > @ 5 1 8 = 0 A J I > A 0 = 5 1; 0 3 > ? @ 8 O B = 8 7 0 4 > 1 8 2 0 = 0
H 0 D @ 0 =, : 0 : B > 8 @ > 2 5 = 5 B > > B 7 0 9 F 8, ? ; J E > 2 5 8 ? B 8 F 8.
0 @ 0 7 8 B 8 : 0 B > : @ J 3; 8 G 5 @ 2 5 8, ; 8 A B = 8 @ J 6 4 8 8 ; C :> 2 8 G = 8
? ; 5 A 5 = 8 A J I > 7 0 A B @ 0 H 0 2 0 B @ 5 :>; B 0 B 0.

0 A 0 6 4 0 = 5:

0 9-4 > 1 @ 5 5 4 0 A 5 7 0 A 0 6 4 0 2 ? >; 5 B 0, : > 8 B > A 0 = 0 :; > = 5 = 8 = 0
N 3, : > 5 B > > A 8 3 C @ 0 2 0 <0 : A 8 <0 ;= 8 7; 0 3 0 = 5 = 0 A; J = F 5.
(0 D @ 0 => 2 8 B 5 @ 0 A B 5 = 8 O A 5 = C 6 4 0 O B > B ? @ 0 : 0 A; J = G 5 2 0
A 2 5 B; 8 = 0 8 = 5 2 8 @ 5 O B = 0 A O = : 0. ! 5 2 5 @ = > B > ? >; C : J; 1 > A 5
A 0 4 8 ? @ 5 7 N = 8. C :> 2 8 F 8 B 5 A 5 7 0 A 0 6 4 0 B = 0 4 J; 1 > G 8 = 0 7 4 > 1 5
A <. > 1 8 2 8 B 5 8 : 0 G 5 A B 2 > B > 8 < A 5 2; 8 O O B > B :; 8 < 0 B 0,
4 J; 1 > G 8 = 0 B 0 = 0 7 0 A 0 6 4 0 = 5 8 @ 0 7 A B > O = 8 5 B > < 5 6 4 C
; C :> 2 8 F 8 B 5. C :> 2 8 F 8 B 5, 7 0 A 0 4 5 = 8 ? >- 4 J; 1 > :>, 4 0 2 0 B
? >- < 0 ;> F 2 5 B = 8 ? J ? : 8 8 4 J I 5 @ = 8 ; C :> 2 8 F 8, =>
? >; C G 5 = 8 O B H 0 D @ 0 = 5 A ? >- 2 8 A > :> : 0 G 5 A B 2 >. @ 8 C A; > 2 8 O B 0,
A J I 5 A B 2 C 2 0 1 8 2 B 0; 8 O, 7 0 A 0 6 4 0 = 5 B > = 0 ; C :> 2 8 F 8 B 5 = 0 1 5 A <
4 J; 1 > G 8 = 0 4 0 2 0 > ? B 8 <0 ;= 8 = 8 H; 8 H 0 D @ 0 =, 0 ? >- ? ; 8 B > B >
7 0 A 0 6 4 0 = 5 = 0 8-1 0 A < 4 0 2 0 = 0 9- <=> 3 > F 2 5 B > 2 5 8 4 J I 5 @ = 8
; C :> 2 8 F 8. B 0; 8 O ; C :> 2 8 F 8 B 5 A 5 7 0 A 0 6 4 0 B = 0 2-3 A <
@ 0 7 A B > O = 8 5. ? B 8 <0 ;= 8 B 5 ? @ 0 : B 8 : 8 = 0 7 0 A 0 6 4 0 = 5 2 0 @ 8 @ 0 B
A 8 ;= > < 5 6 4 C B 0; 8 O, J @ F 8 O, 0 @ > :> 8 A ? 0 = 8 O 8 A 0
A J > 1 @ 0 7 5 = 8 A E 0 @ 0 : B 5 @ = 8 O 7 0 A J > B 2 5 B = 0 B 0 A B @ 0 = 0 :; 8 < 0 B.

@ C 3 = 0 G 8 =: 7 0 A 0 6 4 0 = 5 = 0 ? @ 5 4 2 0 @ 8 B 5; => ? > : 0 @ 0 ; 8 8
F J D = 0 ; 8 ? @ 5 7 ? @ >; 5 B B 0 <8=7 C E 0 @ 8.

@ 5 7 8 < C 2 0 = 5: A 0 = 4 J G 5 B 0 A J A 7 0 A 0 4 5 = 8 @ 0 A B 5 = 8 O = 0
= 5 < @ 0 7 > 2 8 B > 8 B J <=> < O A B >. 0 = 5 A 5 4 > ? C A : 0 8 7 A C H 0 2 0 = 5
= 0 ? @ J A B B 0. ! ; 5 4 ? > = 8 : 2 0 = 5 A 5 8 7 = 0 A O B = 0 A 2 5 B >. @ 5 7
2 B > @ 0 B 0 3 > 4 8 = 0 ? @ 5 7 8 < C 2 0 = 5 B > = 5 2 8 = 0 3 8 5 C A ? 5 H = >.

> ; 8 2 0 = 5, B > @ 5 = 5: ! 0 = 4 J G 5 B 0 B 0 A J A 7 0 A 0 4 5 = 8 @ 0 A B 5 = 8 O A 5
? > 4 4 J @ 6 0 B ; 5 :> 2 ; 0 6 = 8 4 > ? > = 8 : 2 0 = 5 B >. ! ; 5 4 : 0 B >
F 8 : ; 5 = 5 B > 7 0 ? > G = 5, A 5 ? >; 8 2 0 C < 5 @ 5 => 8 A 5 = 0 B > @ 0 2 0
5 4 8 = ? J B. 0 = 5 A 5 4 > ? C A : 0 7 0 4 J @ 6 0 = 5 = 0 2 > 4 0. ! ; 5 4 : 0 B >
? @ 5 F J D B O B, 7 0 5 4 => A :> @ 5 => 2 8 B 5 B C D 8 A 5 7 0 A 0 6 4 0 B 2
3 @ 0 4 8 = 0 B 0 8 A 5 = 0 B > @ 0 2 0 B > 1 5 2 5 4 = J 6.