

D01.

Part 1: a) (4 points)	$X =$ $Y =$			
	ID	ϕ (°)	X ()	Y ()
	1	2.0		
	2	−3.0		
	3	4.0		
	4	−5.0		
	5	6.0		
	6	8.0		
	7	10.0		
	8	−12.0		
	9	15.0		
	10	20.0		
	11	−22.0		
	12	25.0		
	13	30.0		
	14	−35.0		
	15	40.0		

D01.

Part 1: b) (18 points)	Graph number: D01.1b $a =$ $b =$ $\sigma_a =$ $\sigma_b =$
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Part 1: c) (4 points)	$M_{WD} =$ $\Delta M_{WD} =$
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D01.

Part 2: a) (6 points)	$f_M =$ $f_M = \quad M_\odot$
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D01.

Part 2: b) (5 points)	$M_{\text{PSR}} =$ $\Delta M_{\text{PSR}} =$
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Part 2: c) (2 points)	$n_{\sigma} =$ Yes ☐ No ☐
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Part 3: a) (3 points)	Roemer delay: ☐ Achromatic ☐ Chromatic Dispersion measure delay: ☐ Achromatic ☐ Chromatic Shapiro delay: ☐ Achromatic ☐ Chromatic
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D01.

Part 3: b1) (1 point)	$\Delta t_{DM} =$
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Part 3: b2) (1 point)	
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Part 3: c) (3 points)	Roemer delay: A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ Dispersion measure delay: A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ Shapiro delay: A ☐ B ☐ C ☐ D ☐ E ☐ F ☐
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D01.

Part 3: d1) (1 point)	A ☐ B ☐ C ☐ D ☐
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Part 3: d2) (2 points)	A ☐ B ☐ C ☐ D ☐
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D02.

Part 1: a) (6 points)	$\Delta T_A =$ $\Delta T_B =$ $\Delta T_C =$ $\Delta T_D =$ $\Delta T_{\text{mean}} =$ $\sigma_T =$
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Part 1: b) (3 points)	$\Delta T_W =$ $\Delta T_E =$ $\Delta T_W - \Delta T_E =$
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Part 1: c) (6 points)	
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D02.

Part 2 (3 points)	$R =$ $z_{\text{true}} =$
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Part 3: a) (5 points)	
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Part 3: b) (10 points)	Graph number: D02.3b $(x_0, y_0) \approx$
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Part 4: a) (4 points)	$\phi_{\text{true}} =$ $\Delta T_{\text{true}} =$
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D02.

Part 4: b) (8 points)	$dz =$
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Part 4: c) (2 points)	$\varepsilon_A =$ $\varepsilon_B =$ $\varepsilon_C =$ $\varepsilon_D =$
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Part 4: d) (3 points)	$d =$
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D03.

Part 1: a) (5 points)	LDR (ID)	$\Delta \log M_*^{\text{tot}}$ (Δx_i)	$\Delta \log M_{\text{BH}}$ (Δy_i)	Weight (w_i)
	1	0.24	0.14	
	2	0.30	0.30	
	3	0.37	0.12	
	4	0.46	0.02	
	5	0.36	0.17	
	6	0.43	0.11	
	7	0.43	0.03	
	8	0.39	0.08	
	9	0.35	0.08	
	10	0.41	0.06	

D03.

Part 1: b) (12 points)	Graph number: D03.1b
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Part 1: c) (7 points)	$\alpha =$ $\beta =$ $\Delta\alpha =$ $\Delta\beta =$
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Part 1: d1) (2 points)	A ☐ B ☐ C ☐ D ☐
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Part 1: d2) (2 points)	A ☐ B ☐ C ☐ D ☐
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D03.

Part 2: a) (2 points)	$r_h =$
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Part 2: b) (4 points)	$\frac{r_h}{a} =$ A ☐ B ☐ C ☐ D ☐
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D03.

Part 3: a) (7 points)	$r_t =$ $M_H =$ $M_H =$ $M_\odot$
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Part 3: b) (4 points)	$\log M_{*,\max}^{\text{tot}} =$ Maximum value of $\log M_{*,\max}^{\text{tot}}$: Minimum value of $\log M_{*,\max}^{\text{tot}}$: A ☐ B ☐ C ☐ D ☐
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Part 3: c) (5 points)	Area =
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