

# Prediction

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> predict(reg1, africa)
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1	2	3	4	5	6	7	8
126764.61	54518.55	23402.63	27248.31	28044.37	20060.58	40531.52	16458.32
9	10	11	12	13	14	15	16
17613.22	23907.08	15720.62	51229.25	22388.39	40768.04	16639.83	237823.61
17	18	19	20	21	22	23	24
19968.69	17947.20	80898.27	24049.88	16545.73	43550.15	24717.92	16131.68
25	26	27	28	29	30	31	32
58146.41	17343.62	17676.58	34169.52	29237.12	24442.74	26954.44	18527.76
33	34	35	36	37	38	39	40
24027.01	102598.67	37998.99	23993.94	25920.52	213084.67	24901.98	15403.75
41	42	43	44	45	46	47	48
29774.56	16455.21	19351.85	18804.40	240968.75	55287.57	17776.99	63557.34
49	50	51	52	53			
19758.43	51857.54	45500.02	29023.89	26232.97			

# Formula Syntax

Symbol	Example	Description
~	$y \sim x1$	Defines the formula (necessary to create a formula object)
+	$y \sim x1 + x2$	Include the variable
-	$y \sim -1 + x1$	Delete a term, usually a 1 for the intercept
:	$y \sim x1 + x1:x2$	Interaction term
*	$y \sim x1*x2$	Interaction between the variables and each individually; same as $y \sim x1 + x2 + x1:x2$
^	$y \sim (x1, x2, x3)^3$	Include variables and all interactions, up to 3-way interactions
I ( )	$y \sim I(x1^2)$	Wrapper for transforming variables without having to create a new variable
poly ( )	$y \sim poly(x1, 2)$	Creates polynomial terms up to the degree specified