

# ArcGIS® Data Reviewer Checks



## ATTRIBUTE CHECKS

<div>Domain</div> <div>Finds attribute values that do not comply with coded value or range domains that are associated with an attribute field.</div> <div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div></div></div>	<div><table><tr><th>LANDUSE</th><th>DESCRIPTION</th></tr><tr><td>000</td><td>AGR</td></tr><tr><td>SDP</td><td>UNCLASSIFIED AGRICULTURE PLAN</td></tr><tr><td>IND</td><td>INDUSTRIAL</td></tr></table><div><div>AGR</div><div>IND</div><div>NRN</div></div></div>	LANDUSE	DESCRIPTION	000	AGR	SDP	UNCLASSIFIED AGRICULTURE PLAN	IND	INDUSTRIAL							
LANDUSE	DESCRIPTION															
000	AGR															
SDP	UNCLASSIFIED AGRICULTURE PLAN															
IND	INDUSTRIAL															
<div>Query Attributes</div> <div>Finds records based on a WHERE clause run against row attributes.</div> <div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div></div></div>	<div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>TYPE = 4</div></div></div>															
<div>Regular Expression</div> <div>Finds features and rows that contain text values that do not match a defined pattern.</div> <div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div></div></div>	<div><table><tr><th>FIELD</th><th>REGULAR EXPRESSION</th><th>YEAR</th></tr><tr><td></td><td></td><td>1805</td></tr><tr><td></td><td></td><td>1972</td></tr><tr><td>YEAR</td><td>(19/20)\D\D</td><td>2005</td></tr><tr><td></td><td></td><td>200A</td></tr></table></div>	FIELD	REGULAR EXPRESSION	YEAR			1805			1972	YEAR	(19/20)\D\D	2005			200A
FIELD	REGULAR EXPRESSION	YEAR														
		1805														
		1972														
YEAR	(19/20)\D\D	2005														
		200A														
<div>Relationship</div> <div>Finds rows in feature classes and stand-alone tables that violate cardinality or relationship rules defined in a Relationship class.</div> <div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div></div></div>	<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><table><tr><th>CROP</th></tr><tr><td>1 CORN</td></tr><tr><td>2 RICE</td></tr><tr><td>3 WHEAT</td></tr></table></div></div>	CROP	1 CORN	2 RICE	3 WHEAT											
CROP																
1 CORN																
2 RICE																
3 WHEAT																
<div>Subtype</div> <div>Finds features with improper or null subtype values.</div> <div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div></div></div>	<div><table><tr><th>SUBTYPES</th></tr><tr><td>1 HIGHWAYS</td></tr><tr><td>2 MAJOR ROAD</td></tr><tr><td>3 LOCAL STREETS</td></tr><tr><td>4 ALLEY</td></tr></table><div><div></div><div></div></div><div>SUBTYPE=0</div></div>	SUBTYPES	1 HIGHWAYS	2 MAJOR ROAD	3 LOCAL STREETS	4 ALLEY										
SUBTYPES																
1 HIGHWAYS																
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<div>Table to Table Attribute</div> <div>Finds features or rows that contain attribute values that meet a relationship you define and compares them to values in another feature class or stand-alone table.</div> <div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div></div></div>	<div><table><tr><th>FEATURE CLASS</th><th>SCALE</th></tr><tr><td>OID</td><td>SCALE</td></tr><tr><td>1</td><td>10,000</td></tr><tr><td>2</td><td>20,000</td></tr><tr><td>3</td><td>10,000</td></tr><tr><td>4</td><td>30,000</td></tr></table></div>	FEATURE CLASS	SCALE	OID	SCALE	1	10,000	2	20,000	3	10,000	4	30,000			
FEATURE CLASS	SCALE															
OID	SCALE															
1	10,000															
2	20,000															
3	10,000															
4	30,000															
<div>Unique Field Value</div> <div>Finds rows in feature classes and stand-alone tables that contain nonunique values in a field or a list of fields that are editable.</div> <div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div></div></div>	<div><table><tr><th>FEATURE CLASS 1</th></tr><tr><td>7</td><td>25</td></tr><tr><td>8</td><td>18</td></tr><tr><td>9</td><td>18</td></tr></table></div>	FEATURE CLASS 1	7	25	8	18	9	18								
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## POLYGON CHECKS

<b>Evaluate Polygon Perimeter and Area</b> Finds polygon features based on the area or perimeter of the entire polygon or its individual parts or segments.	 <b>&gt;3 AND &lt;8</b>
<b>Find Polygons with Holes</b> Finds polygon features that have holes.	
<b>Polygon Gap is Sliver</b> Finds gaps between polygon features that are below a specified thinness ratio.	
<b>Polygon Overlap is Sliver</b> Find overlaps between polygon features that are below a specified thinness ratio.	
<b>Polygon Sliver</b> Finds polygons below a specified thinness ratio (T) and optionally whose area is within a specified threshold.	
<b>Unclosed Polygon</b> Finds unclosed rings in polygon features.	
<b>Unnecessary Polygon Boundaries</b> Finds border geometries for polygons that share a common boundary and identical attribution.	 <b>TYPE = TYPE</b>

## EVENT CHECKS

<b>Event on Event</b> Finds linear referenced events that overlay other events based on a user-defined relationship.	 <b>R=Route E=Event</b>
<b>Find Orphan Events</b> Finds linear referenced events that have no association to a route feature.	 <b>R=Route E=Event</b>
<b>Find Event Gaps</b> Finds linear referenced events with gaps between events of the same category, in the same route, or across multiple routes.	 <b>R=Route E=Event</b>
<b>Find Event Overlaps</b> Finds linear referenced events that have overlaps with events of the same category, in the same route, or across multiple routes.	 <b>R=Route E=Event</b>
<b>Invalid Event Measures</b> Finds linear referenced events that contain invalid measure values in the same route or across multiple routes.	 <b>R=Route E=Event</b>

## POLYLINE CHECKS

<b>Evaluate Polyline Length</b> Finds polyline segments, parts, or features that have a line length within a specified tolerance.	 <b>LENGTH &lt;20</b>
<b>Find Dangles</b> Finds polyline features with nodes that are within a user-defined tolerance but not connected to other polyline or polygon features.	
<b>Find Disconnected Polylines</b> Finds polyline features that are not connected to other features in the same or other data sources.	
<b>Monotonicity</b> Finds vertices in z-enabled or m-enabled polylines that are not strictly increasing or decreasing in value or are trending based on specified conditions.	
<b>Polyline or Path Closes on Self</b> Finds paths or lines in polyline features that close themselves.	
<b>Unnecessary Nodes</b> Finds features that share a node and have identical attributes in editable fields.	 <b>TYPE = TYPE</b>

## LEGEND

	<b>REVIEWER RULES IN A GEODATABASE</b> Reviewer geodatabase rules are configured ArcGIS® Data Reviewer checks that evaluate the quality of features and rows stored in a geodatabase. Rules are created using tools in ArcGIS® Pro and support both constraint attribute rule and validation attribute rule workflows. Rules are stored in a geodatabase that can be shared by exporting as a CSV or XML workspace document file.
	<b>RUN DATA CHECKS</b> Data Reviewer Checks with Run Data Checks tool: Enables a brief assessment of feature quality in a map. Results are stored in a layer loaded in the contents pane, with a history pane keeping record of identified features that failed validation.

## FEATURE INTEGRITY CHECKS

<b>Check Geometry</b> Finds features whose geometry is empty, nothing, or not simple, as well as features with empty envelopes.	<table><thead><tr><th>OBJECTID</th><th>SHAPE</th></tr></thead><tbody><tr><td>1</td><td>POLYLINE</td></tr><tr><td>2</td><td>POLYLINE</td></tr><tr><td>3</td><td>NULL</td></tr></tbody></table> 	OBJECTID	SHAPE	1	POLYLINE	2	POLYLINE	3	NULL
OBJECTID	SHAPE								
1	POLYLINE								
2	POLYLINE								
3	NULL								
<b>Cutbacks</b> Finds segments where the angle between segments in a polygon or polyline is below a specified minimum value.	 <b>ANGLE &lt;25°</b>								
<b>Duplicate Vertex</b> Finds vertices from the same feature that are collocated or within a specified tolerance of one another.									
<b>Evaluate Part Count</b> Finds features with a part count that is within a specified value.	 <b>PARTS&gt;1</b>								
<b>Evaluate Vertex Count</b> Finds polyline or polygon features that have a vertex count within a specified tolerance.	 <b>NUMBER OF VERTICES&gt;2 AND&lt;5</b>								
<b>Nonlinear Segment</b> Finds polyline or polygon features that contain nonlinear segments such as arcs and curves.									

## SPATIAL RELATIONSHIP CHECKS

<b>Composite</b> Finds features or rows based on the result from multiple Data Reviewer checks.	 <b>FEATURE ON FEATURE 1</b> <b>FEATURE ON FEATURE 2</b>
<b>Duplicate Feature</b> Finds features that contain duplicate geometry and attribute values.	
<b>Evaluate Intersection Count</b> Finds vertices for polyline features in one feature class that intersect polyline or polygon features in a second feature class a specified number of times.	 <b>INTERSECTION&gt;3</b>
<b>Feature on Feature</b> Finds features that have a specific relationship either from two feature layers or within the same feature layer.	
<b>Valency</b> Finds points or nodes of linear features that intersect with a specified number of linear features.	 <b>≠ 2</b>

## Z-VALUE CHECKS

<b>Adjacent Vertex Elevation Change</b> Finds vertices for polyline or polygon features with elevation (z-value) changes greater than the specified tolerance.	 <b>Z&lt;400'</b>
<b>Different Z at Intersection</b> Finds two intersecting line features whose z-value difference is within the minimum/maximum specified range at the point where they intersect.	 <b> Z Δ =33'</b>
<b>Evaluate Z Values</b> Finds features whose z values are within a specified range.	 <b>Z</b>