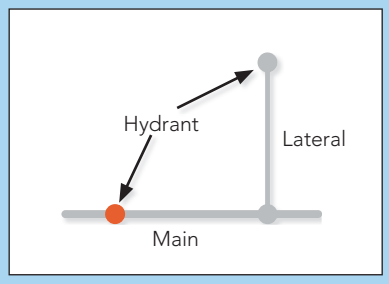


## Database Validation Checks

### Connectivity Rules

Returns geometries for features that violate the geometric network connectivity rules



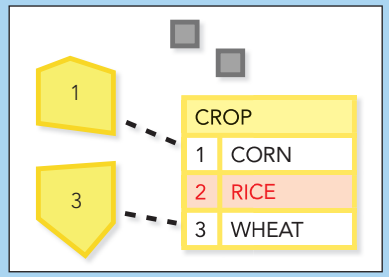
### Domain

Validates coded value and range domains to ensure that all values meet domain constraints

LAND USE	DESCRIPTION
000	UNCLASSIFIED
AGR	AGRICULTURE PLAN
IND	INDUSTRIAL

### Relationships

Searches for records that are orphans or have improper cardinality in a relationship class



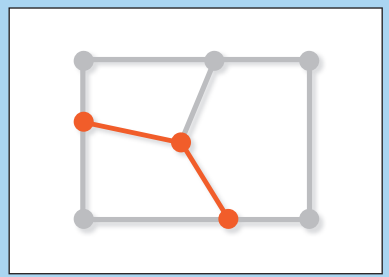
### Subtype

Searches for feature classes with improper or null subtypes

SUBTYPES	Subtype=0
1	HIGHWAYS
2	MAJOR ROAD
3	LOCAL STREETS
4	ALLEY

### Topology Rules

Returns the geometry of features that violate the topology rules that have been defined for a feature dataset in the geodatabase



## Default Checks

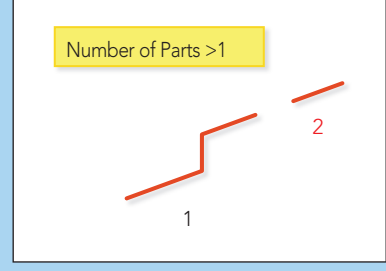
### Invalid Geometry

Finds features whose geometry is empty, nothing, or not simple, as well as features with empty envelopes

OBJECTID	SHAPE	FCSUBTYPE
1	POLYLINE	AQ040-BRIDGE LINE
2	POLYLINE	AQ040-BRIDGE LINE
3	NULL	AQ040-BRIDGE LINE

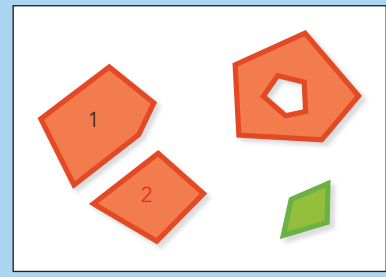
### Multipart Line

Searches for polyline features with more than one part



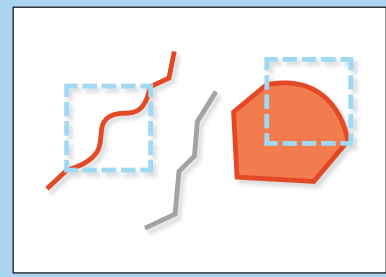
### Multipart Polygon

Finds polygon features with more than one part and polygon features with holes



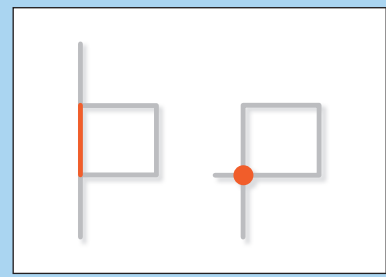
### Nonlinear Segment

Searches for nonlinear segments, such as arcs and curves, in line and polygon features



### Polyline or Path Closes on Self

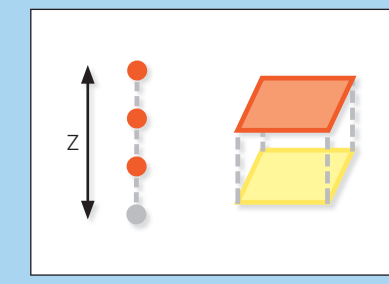
Finds paths and lines in polylines that touch or cross themselves



## Duplicate Geometry Checks

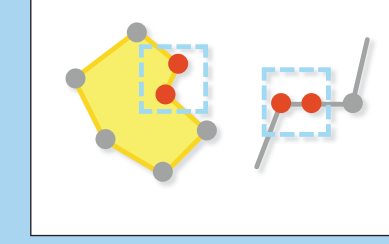
### Duplicate Geometry

Finds features of the same geometry type that are collocated



### Duplicate Vertex

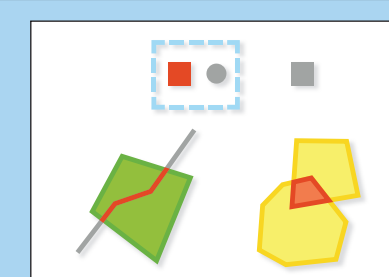
Searches for vertices in selected polyline or polygon feature classes that are within a specified tolerance of each other



## Feature on Feature Checks

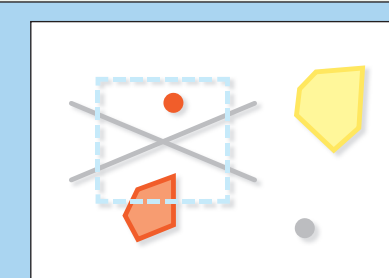
### Geometry on Geometry

Searches for features from two different feature classes or within the same feature class that spatially intersect (e.g., intersect) or are within a tolerance of each other



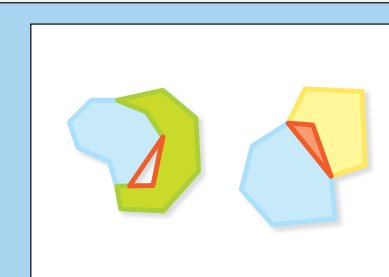
### Intersection on Geometry

Returns geometries for features in Feature Class 1 that intersect with the intersections from features from Feature Class 2 and 3



### Polygon Overlap/Gap Is Sliver

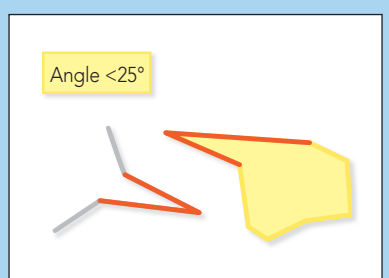
Returns overlap/gap geometries between polygon features from two feature classes that have a thinness ratio beneath a user-specified threshold; optionally requires that the overlap/gap polygons be beneath a maximum area threshold



## Polyline Checks

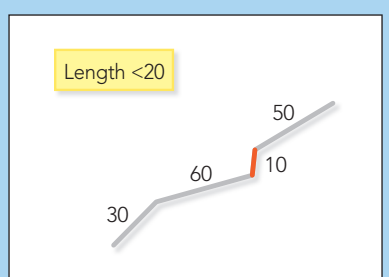
### Cutbacks

Identifies segments where the angle between segments in a polygon or polyline is below a specified minimum value



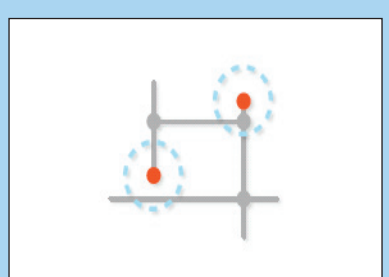
### Evaluate Polyline Length

Searches for segment, part/path, and polyline features whose length is within a specified range



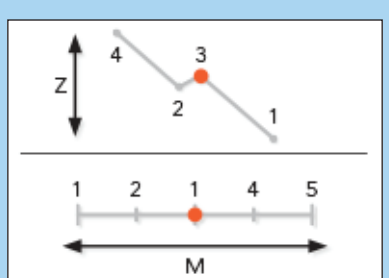
### Find Dangles

Finds polyline features with nodes that are within a user-defined tolerance but not connected to other polyline or polygon features



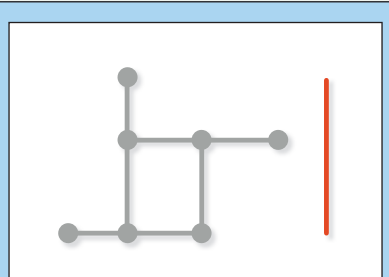
### Monotonicity

Finds polylines with vertices that are not strictly increasing or decreasing in value or are trending based on specified conditions



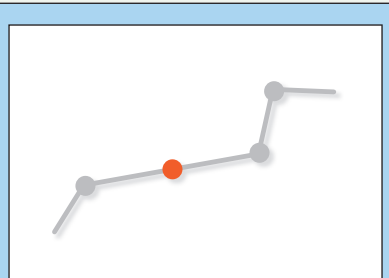
### Orphan

Finds single polyline features that are not connected in the database topology



### Unnecessary Nodes

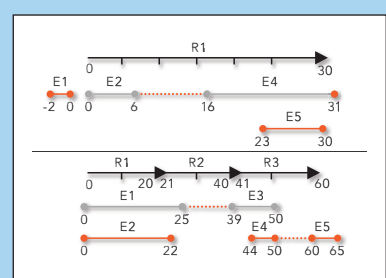
Finds features that share a node and have identical attributes in editable fields



## Event Checks

### Invalid Events

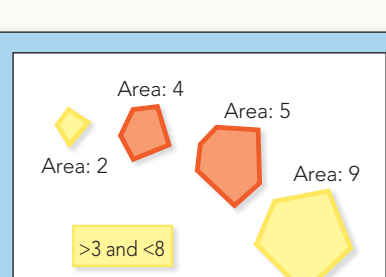
Finds linear referenced events that do not have an associated route (orphaned events) or contain invalid measure values. The check also identifies gaps or overlaps between events within the same route or across multiple routes.



## Polygon Checks

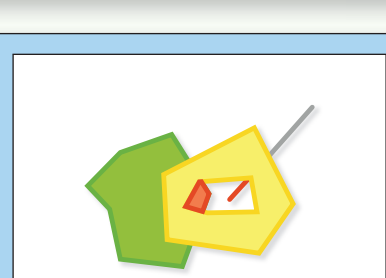
### Evaluate Polygon Perimeter and Area

Searches for polygon, part, ring, or segment features whose area or perimeter is within a specified range



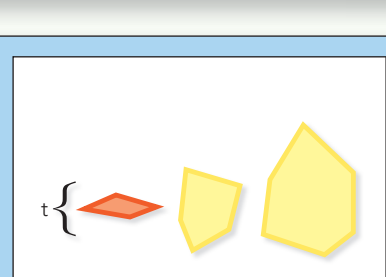
### Invalid Hole Feature

Finds features that intersect polygon feature holes



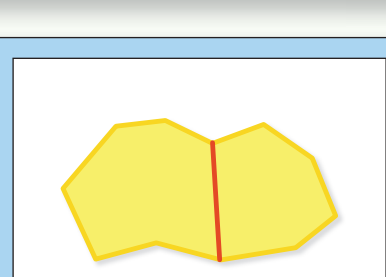
### Polygon Sliver

Finds polygons below a specified thinness ratio (t) and optionally whose area is within a specified threshold



### Unnecessary Polygon Boundaries

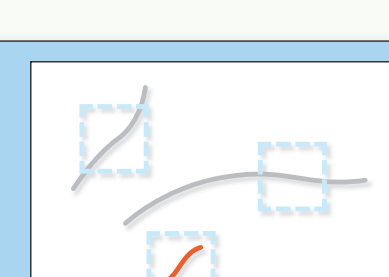
Returns border geometries for polygons that share a common boundary and identical attribution



## Spatial Parameter Evaluation Checks

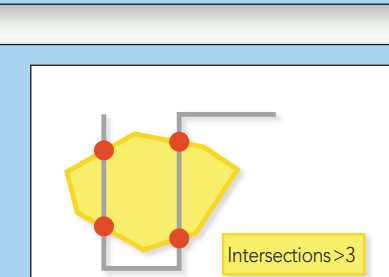
### Evaluate Extent

Returns features where the extent properties (x and y) are within specified parameters



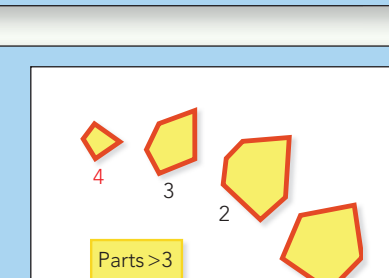
### Evaluate Intersection Count

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



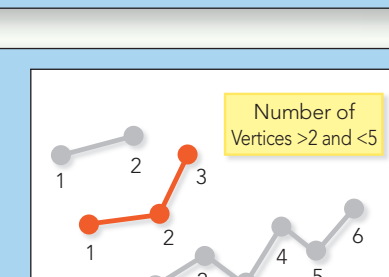
### Evaluate Part Count

Finds features with a part count that is within a specified range



### Evaluate Vertex Count

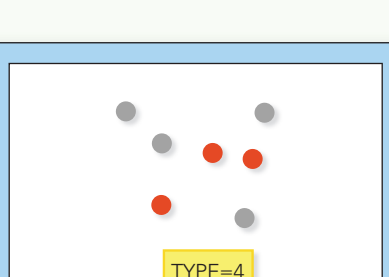
Searches for features with a vertex count that is within a specified range



## Table Checks

### Execute SQL

Finds features based on a SQL query WHERE clause



### Regular Expression

Finds features with attribute values that violate the regular expression

FIELD	REGULAR EXPRESSION	YEAR
YEAR	(19 20)/D/D	1905
		1972
		2005
		200A

### Table to Table Attribute

Returns rows whose attributes match those of a feature class or table and/or comply with a user-defined WHERE clause comparing the attributes between feature classes and/or tables

FEATURE CLASS	OID	SCALE	SCALE
1	10,000	20,000	
2	20,000	30,000	
3	10,000		
4	30,000		

### Unique ID

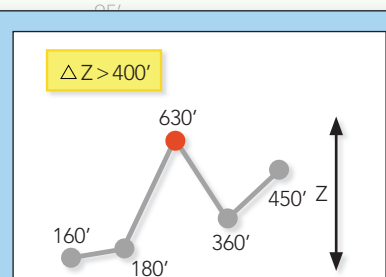
Checks the values of a set of fields across a set of tables and feature classes for uniqueness within a given workspace

FEATURE CLASS 1	FEATURE CLASS 2
7 25	1 36
8 18	2 21
9 18	3 18

## Z-Value Checks

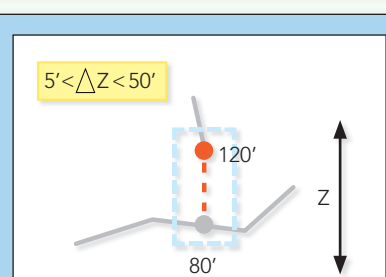
### Adjacent Vertex Elevation Change

Finds vertices for polyline or polygon features with elevation (z-value) changes greater than the specified tolerance



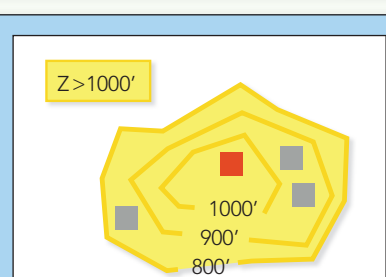
### Different Z at Intersection

Finds two intersecting line features whose z-value difference is within the minimum/maximum specified tolerance values at the point where they intersect



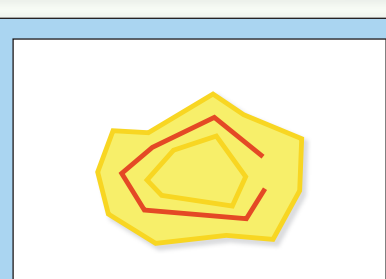
### Evaluate Z-Values

Searches for features whose z-values are within a specified range



### Polygon/Ring Closed

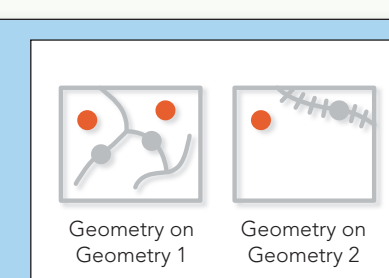
Searches for unclosed rings in polygons based on the x-value, y-value, and z-value



## Advanced Checks

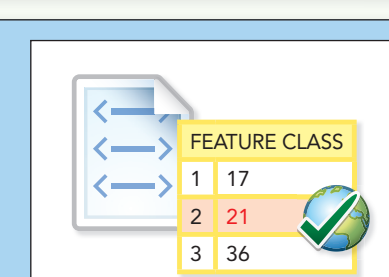
### Composite

Searches for features that satisfy combined Geometry on Geometry and/or Table to Table Attribute checks by feeding the results of one check into the next check



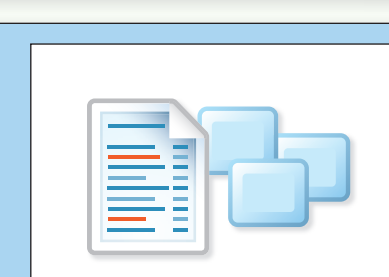
### Custom

Returns records that meet the validation conditions of a custom check you developed to meet your specific requirements



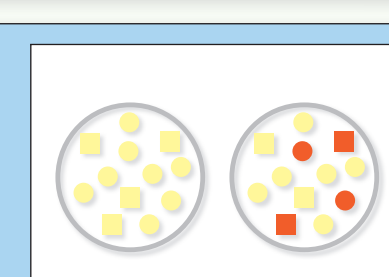
### Metadata

Validates that the specified GIS item descriptions have been populated to comply with either a standards-based metadata schema or user-specified content requirements



### Sampling

Generates a statistical sampling of features or records from one or more layers or tables



### Valency

Searches for points or nodes of linear features that intersect with a specified number of linear features

