Directed graphs edit

Abbreviation: DiGraph

Definition 1. A *directed graph* (or *digraph* for short) is a structure $\mathbf{G} = \langle G, E\rangle$ such that

E is binary relation on G: $E \subseteq G \times G$

Remark: This is a template. If you know something about this class, click on the 'Edit text of this page' link at the bottom and fill out this page.

It is not unusual to give several (equivalent) definitions. Ideally, one of the definitions would give an irredundant axiomatization that does not refer to other classes.

Morphisms. Let $\mathbf{G}$ and $\mathbf{H}$ be directed graphs. A morphism from $\mathbf{G}$ to $\mathbf{H}$ is a function $h : G \to H$ that preserves E: $\langle x, y\rangle \in E^{\mathbf{G}} \implies \langle h(x), h(y)\rangle \in E^{\mathbf{H}}$

Definition 2. An ... is a structure $\mathbf{A} = \langle A, ...\rangle$ of type $\langle ...\rangle$ such that

... is ...: *axiom*

... is ...: *axiom*

Basic Results.

Examples.

1.

Finite Members. $f(n) =$ number of members of size n.

$f(1) =$ 1	$f(6) =$
$f(2) =$	$f(7) =$
$f(3) =$	$f(8) =$
$f(4) =$	$f(9) =$
$f(5) =$	$f(10) =$

Subclasses.

... subvariety

... expansion

Superclasses.

... supervariety

... subreduct

References

[1] F. Lastname, *Title*, Journal, **1**, 23–45 MRreview

Properties. (description)
Feel free to add or delete properties from this list. The list below may contain properties that are not relevant to the class that is being described.

Classtype	variety
Equational theory	decidable
Quasiequational theory	decidable
First-order theory	undecidable
Locally finite	
Residual size	
Congruence distributive	no
Congruence modular	no
Congruence n-permutable	no
Congruence regular	no
Congruence uniform	no
Congruence extension property	
Definable principal congruences	
Equationally def. pr. cong.	
Amalgamation property	yes
Strong amalgamation property	yes
Epimorphisms are surjective	