AHP-OS Latest News

# AHP Priority Calculator

Language: English Deutsch Español Português

## AHP Criteria

Select number and names of criteria, then start pairwise comparisons to calculate priorities using the Analytic Hierarchy Process.

Select number of criteria:
Input number and names (2 - 20) 8 Go OK

### Pairwise Comparison

28 pairwise comparison(s). Please do the pairwise comparison of all criteria. When completed, click *Check Consistency* to get the priorities.

With respect to *AHP priorities*, which criterion is more important, and how much more on a scale 1 to 9?

| | A - wrt AHP priorities - or B? | | Equal | How much more? |
|---|---|---|---|---|
| 1 | ◉ Number of Varieties of Solid Geometry Grasped | ○ Speed of Grasp | ○ 1 | ◉ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 2 | ○ Number of Varieties of Solid Geometry Grasped | ◉ Volume of Object Enclosed | ○ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ◉ 7 ○ 8 ○ 9 |
| 3 | ○ Number of Varieties of Solid Geometry Grasped | ◉ Surface Area of Object Enclosed | ○ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ◉ 7 ○ 8 ○ 9 |
| 4 | ○ Number of Varieties of Solid Geometry Grasped | ◉ Ability to Grasp Deformable Solid Objects | ○ 1 | ◉ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 5 | ○ Number of Varieties of Solid Geometry Grasped | ◉ Capability to Maintain Surface Integrity | ○ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ◉ 9 |
| 6 | ○ Number of Varieties of Solid Geometry Grasped | ◉ Cost of Implementation | ○ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ◉ 7 ○ 8 ○ 9 |
| 7 | ○ Number of Varieties of Solid | ◉ Time of Implementation | ○ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ◉ 7 ○ 8 ○ 9 |

| | A - wrt AHP priorities - or B? Geometry Grasped | | Equal | How much more? |
|---|---|---|---|---|
| 8 | ○ Speed of Grasp | ◉ Volume of Object Enclosed | ○ 1 | ○ 2 ○ 3 ○ 4 ◉ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 9 | ○ Speed of Grasp | ◉ Surface Area of Object Enclosed | ○ 1 | ○ 2 ○ 3 ○ 4 ◉ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 10 | ○ Speed of Grasp | ◉ Ability to Grasp Deformable Solid Objects | ○ 1 | ◉ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 11 | ○ Speed of Grasp | ◉ Capability to Maintain Surface Integrity | ○ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ◉ 9 |
| 12 | ○ Speed of Grasp | ◉ Cost of Implementation | ○ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ◉ 7 ○ 8 ○ 9 |
| 13 | ○ Speed of Grasp | ◉ Time of Implementation | ○ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ◉ 7 ○ 8 ○ 9 |
| 14 | ◉ Volume of Object Enclosed | ○ Surface Area of Object Enclosed | ◉ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 15 | ◉ Volume of Object Enclosed | ○ Ability to Grasp Deformable Solid Objects | ○ 1 | ○ 2 ◉ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 16 | ○ Volume of Object Enclosed | ◉ Capability to Maintain Surface Integrity | ○ 1 | ○ 2 ○ 3 ○ 4 ◉ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 17 | ○ Volume of Object Enclosed | ◉ Cost of Implementation | ○ 1 | ◉ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 18 | ○ Volume of Object Enclosed | ◉ Time of Implementation | ○ 1 | ◉ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 19 | ◉ Surface Area of Object Enclosed | ○ Ability to Grasp Deformable Solid Objects | ○ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ◉ 7 ○ 8 ○ 9 |
| 20 | ○ Surface Area of Object Enclosed | ◉ Capability to Maintain Surface Integrity | ○ 1 | ○ 2 ◉ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 21 | ◉ Surface Area of Object Enclosed | ○ Cost of Implementation | ◉ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 22 | ◉ Surface Area of Object Enclosed | ○ Time of Implementation | ◉ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |

| | A - wrt AHP priorities - or B? | | Equal | How much more? |
|---|---|---|---|---|
| 23 | ○ Ability to Grasp Deformable Solid Objects | ◉ Capability to Maintain Surface Integrity | ○ 1 | ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ◉ 7 ○ 8 ○ 9 |
| 24 | ○ Ability to Grasp Deformable Solid Objects | ◉ Cost of Implementation | ○ 1 | ○ 2 ○ 3 ○ 4 ◉ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 25 | ○ Ability to Grasp Deformable Solid Objects | ◉ Time of Implementation | ○ 1 | ○ 2 ○ 3 ○ 4 ◉ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 26 | ◉ Capability to Maintain Surface Integrity | ○ Cost of Implementation | ○ 1 | ○ 2 ◉ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 27 | ◉ Capability to Maintain Surface Integrity | ○ Time of Implementation | ○ 1 | ○ 2 ◉ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |
| 28 | ○ Cost of Implementation | ◉ Time of Implementation | ○ 1 | ◉ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 |

CR = 3.7% OK

Calculate Download_(.csv) ☑ dec. comma

AHP Scale: 1- Equal Importance, 3- Moderate importance, 5- Strong importance, 7- Very strong importance, 9- Extreme importance (2,4,6,8 values in-between).

## Resulting Priorities

### Priorities

These are the resulting weights for the criteria based on your pairwise comparisons:

| Cat | | Priority | Rank | (+) | (-) |
|---|---|---|---|---|---|
| 1 | Number of Varieties of Solid Geometry Grasped | 2.5% | 7 | 1.0% | 1.0% |
| 2 | Speed of Grasp | 2.2% | 8 | 0.8% | 0.8% |

### Decision Matrix

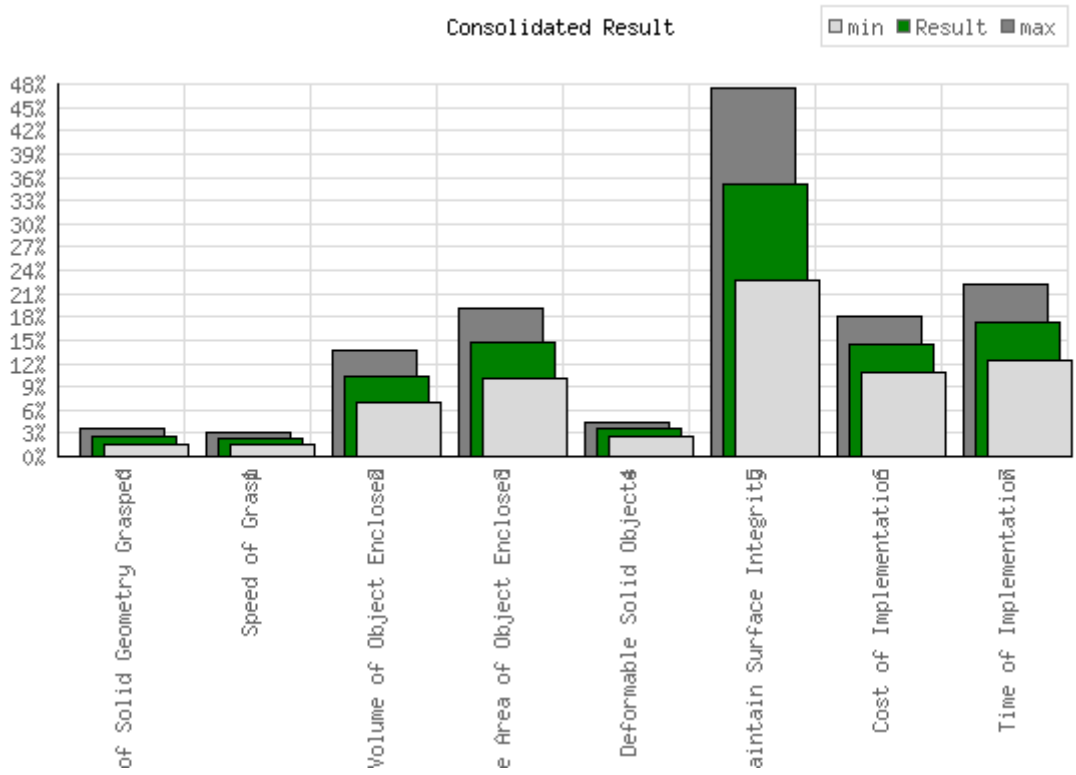
The resulting weights are based on the principal eigenvector of the decision matrix:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 2.00 | 0.14 | 0.14 | 0.50 | 0.11 | 0.14 | 0.14 |
| 2 | 0.50 | 1 | 0.20 | 0.20 | 0.50 | 0.11 | 0.14 | 0.14 |
| 3 | 7.00 | 5.00 | 1 | 1.00 | 3.00 | 0.20 | 0.50 | 0.50 |
| 4 | 7.00 | 5.00 | 1.00 | 1 | 7.00 | 0.33 | 1.00 | 1.00 |
| 5 | 2.00 | 2.00 | 0.33 | 0.14 | 1 | 0.14 | 0.20 | 0.20 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | Volume of Object Enclosed | 10.4% | 5 | 3.4% | 3.4% | 6 | 9.00 | 9.00 | 5.00 | 3.00 | 7.00 | 1 | 3.00 | 3.00 |
| | | | | | | 7 | 7.00 | 7.00 | 2.00 | 1.00 | 5.00 | 0.33 | 1 | 0.50 |
| 4 | Surface Area of Object Enclosed | 14.6% | 3 | 4.5% | 4.5% | 8 | 7.00 | 7.00 | 2.00 | 1.00 | 5.00 | 0.33 | 2.00 | 1 |
| 5 | Ability to Grasp Deformable Solid Objects | 3.6% | 6 | 1.0% | 1.0% | | | | | | | | | |
| 6 | Capability to Maintain Surface Integrity | 35.1% | 1 | 12.4% | 12.4% | | | | | | | | | |
| 7 | Cost of Implementation | 14.5% | 4 | 3.6% | 3.6% | | | | | | | | | |
| 8 | Time of Implementation | 17.2% | 2 | 4.9% | 4.9% | | | | | | | | | |

Number of comparisons = 28
**Consistency Ratio CR** = 3.7%

Principal eigen value = 8.364
Eigenvector solution: 5 iterations, delta = 4.7E-8

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Done

AHP-OS author: Klaus D. Goepel, BPMSG. Contact Last update: Feb 26, 2022 Rev: 172