

| | | | | | | | | | | | | | | | | | | | | | |
|----|-------------------|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|------|------|------|
| 24 | Rayhan Ardiyanata | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | Reza Adi Saputra | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 26 | Rifqi Kusuma W | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | Ririn Okta Toifah | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | Yuda Pratama | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | ΣB | 20 | 19 | 18 | 19 | 19 | 17 | 16 | 16 | 17 | 17 | 16 | 17 | 16 | 11 | 16 | 19 | 20 | 19 | 17 | 17 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| | P | 1 | 0,95 | 0,90 | 0,95 | 0,95 | 0,85 | 0,80 | 0,80 | 0,85 | 0,85 | 0,80 | 0,85 | 0,80 | 0,55 | 0,80 | 0,95 | 1 | 0,95 | 0,85 | 0,85 |

Tabel Hasil Interpretasi Data terhadap Indeks Kesukaran Soal

| No soal | Indeks Kesukaran | Keterangan |
|---------|------------------|------------|
| 1 | 1,00 | Mudah |
| 2 | 0,95 | Mudah |
| 3 | 0,90 | Mudah |
| 4 | 0,95 | Mudah |
| 5 | 0,95 | Mudah |
| 6 | 0,85 | Mudah |
| 7 | 0,80 | Mudah |
| 8 | 0,80 | Mudah |
| 9 | 0,85 | Mudah |
| 10 | 0,85 | Mudah |
| 11 | 0,80 | Mudah |
| 12 | 0,85 | Mudah |
| 13 | 0,80 | Mudah |
| 14 | 0,55 | Sedang |
| 15 | 0,80 | Mudah |
| 16 | 0,95 | Mudah |
| 17 | 1,00 | Mudah |
| 18 | 0,95 | Mudah |
| 19 | 0,85 | Mudah |
| 20 | 0,85 | Mudah |

Dari 20 Soal yang diujikan kepada 28 siswa, 1 soal memiliki tingkat kesukaran sedang dan 19 soal memiliki tingkat kesukaran mudah.

2. Daya Pembeda Soal

Rumus:

$$D = \frac{BA - BB}{JA - JB}$$

Keterangan :

D = daya beda

BA = jumlah siswa kelompok atas yang menjawab dengan benar

BB = jumlah siswa kelompok bawah yang menjawab dengan benar

JA = jumlah siswa kelompok atas

JB = jumlah siswa kelompok bawah

Interpretasi Daya Pembeda

| Tingkat Daya Beda | Keterangan |
|-------------------|-------------|
| 0,00 – 0,20 | Buruk |
| 0,21 – 0,40 | Cukup |
| 0,41 – 0,70 | Baik |
| 0,71 – 1,00 | Sangat Baik |

Tabel Kelompok Atas

| No | Nama | Skor |
|----|-------------------------|------|
| 1 | Danan Mario | 100 |
| 2 | Devita Ismi Hartanti | 100 |
| 3 | Fadlan Farizki | 100 |
| 4 | Rafel Ramadhan Prasetyo | 100 |
| 5 | Echa Aulia Putri | 100 |
| 6 | Azmi Nadhir Abi Syakur | 97 |
| 7 | Hikmah Nastiti | 97 |
| 8 | Queenara Salsabilla | 97 |
| 9 | Dani Arnanda Putra | 95 |
| 10 | Abiseka Erlangga | 94 |
| 11 | Dwi Indah Apriliana | 94 |
| 12 | Ririn Okta Toifah | 94 |
| 13 | Al Hanif Junior Saputra | 91 |
| 14 | Almira Taskiya S | 91 |

| | | |
|----|------------------------|----|
| 15 | Devita Safitri | 91 |
| 16 | Naila Ayu Ramadani | 91 |
| 17 | Nalendra Satya Pratama | 91 |
| 18 | Rifqi Kusuma Wardani | 91 |

Tabel Kelompok Bawah

| No | Nama | Skor |
|----|--------------------------|------|
| 1 | Muhammad Hilal Ali Yafie | 90 |
| 2 | Alya Asih Dita Safitri | 88 |
| 3 | Blessme Anju Jeremia T | 88 |
| 4 | Rayhan Ardiyanata | 88 |
| 5 | Reza Adi Saputra | 88 |
| 6 | Erly Arnisa | 85 |
| 7 | Maula Phidy Al Ghifari | 85 |
| 8 | Hafni Izzudin Fauzi | 84 |
| 9 | Yuda Pratama | 82 |
| 10 | Kevin Angga Kurniawan | 79 |

Tabel Pengukuran Daya Pembeda Soal Kelompok Atas

| No | Nama | Nomor Soal | | | | | | | | | | | | | | | | | | | |
|----|----------------------|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 1 | Danan Mario | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | Devita Ismi Hartanti | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | Fadlan Farizki | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | Rafel Ramadhan P | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | Echa Aulia Putri | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | Azmi Nadhir Abi S | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | Hikmah Nastiti | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | Queenara Salsabilla | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | Dani Arnanda Putra | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | Abiseka Erlangga | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | Dwi Indah Apriliana | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 | Ririn Okta Toifah | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 13 | Al Hanif Junior S | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 14 | Almira Taskiya S | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | Devita Safitri | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | Naila Ayu Ramadani | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 17 | Nalendra Satya P | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| 18 | Rifqi Kusuma W | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | JA | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| | BA | 18 | 18 | 17 | 18 | 18 | 17 | 16 | 16 | 15 | 17 | 17 | 16 | 16 | 12 | 16 | 17 | 18 | 17 | 17 | 17 |

Tabel Pengukuran Daya Pembeda Soal Kelompok Bawah

| No | Nama | Nomor Soal | | | | | | | | | | | | | | | | | | | |
|----|---------------------|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 1 | Muhammad Hilal Ali | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | Alya Asih Dita S | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| 3 | Blessme Anju J | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | Rayhan Ardiyanata | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | Reza Adi Saputra | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 6 | Erly Arnisa | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 |
| 7 | Maula Phidy | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 8 | Hafni Izzudin Fauzi | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | Yuda Pratama | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | Kevin Angga K | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | JB | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| | BB | 10 | 9 | 9 | 9 | 9 | 8 | 7 | 7 | 10 | 8 | 6 | 9 | 7 | 7 | 8 | 10 | 10 | 10 | 8 | 8 |

Hasil Daya Pembeda

| No Soal | Indeks Kesukaran | Keterangan |
|---------|------------------|------------|
| 1 | 0 | Buruk |
| 2 | 0,10 | Buruk |
| 3 | 0,04 | Buruk |
| 4 | 0,10 | Buruk |
| 5 | 0,10 | Buruk |
| 6 | 0,14 | Buruk |
| 7 | 0,18 | Buruk |
| 8 | 0,18 | Buruk |
| 9 | 0,17 | Buruk |
| 10 | 0,14 | Buruk |
| 11 | 0,34 | Cukup |
| 12 | 0,02 | Buruk |
| 13 | 0,18 | Buruk |
| 14 | 0,04 | Buruk |
| 15 | 0,08 | Buruk |
| 16 | 0,06 | Buruk |

| | | |
|----|------|-------|
| 17 | 0 | Buruk |
| 18 | 0,06 | Buruk |
| 19 | 0,14 | Buruk |
| 20 | 0,14 | Buruk |

Dari 20 butir soal yang diujikan kepada 28 orang siswa, diketahui tidak ada soal pembeda sangat baik dan baik, 1 soal memiliki daya pembeda cukup dan 19 soal memiliki daya pembeda buruk.

3. Efektivitas Distraktor (Pengecoh)

Rumus:

$$D = \frac{N}{A} \times 100\%$$

Keterangan:

D = tingkat distractor (pengecoh)

N = jumlah siswa yang memilih opsi

A = jumlah seluruh siswa

Interpretasi Distraktor (Pengecoh)

| Besaran IP | Keterangan |
|------------|----------------------|
| $\geq 4\%$ | Diterima (baik) |
| $< 4\%$ | Perlu direvisi |
| $= 0$ | Ditolak (tidak baik) |

Tabel Jawaban Siswa

| No | Nama | Jawaban Soal | | | | | | | | | | | | | | | | | | | |
|----|----------------------|--------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 1 | Abiseka Erlangga | C | B | C | C | C | B | D | B | B | B | C | B | C | D | A | B | B | B | B | A |
| 2 | Al Hanif Junior S | C | B | C | C | C | B | D | B | B | B | C | B | A | A | C | B | B | B | B | B |
| 3 | Almira Taskiya S | C | B | C | C | C | B | E | B | A | B | C | B | C | A | C | B | B | B | B | A |
| 4 | Alya Asih Dita S | C | B | C | C | C | B | D | B | B | B | B | B | C | A | B | B | B | B | B | B |
| 5 | Azmi Nadhir Abi S | C | B | C | C | C | B | D | E | B | B | C | B | C | B | C | B | B | B | B | A |
| 6 | Blessme Anju J | C | B | C | C | C | B | D | B | B | B | C | A | A | A | B | B | B | B | B | A |
| 7 | Danan Mario | C | B | C | C | C | B | D | B | B | B | C | B | C | B | C | B | B | B | B | A |
| 8 | Dani Arnanda Putra | C | B | C | C | C | B | D | B | B | B | B | C | B | B | C | B | B | B | B | A |
| 9 | Devita Ismi Hartanti | C | B | C | C | C | B | D | B | B | B | C | B | C | B | C | B | B | B | B | A |
| 10 | Devita Safitri | C | B | C | C | C | B | D | B | A | B | C | B | C | A | C | B | B | B | B | A |
| 11 | Dwi Indah Apriliana | C | B | C | C | C | B | D | B | B | B | C | A | A | B | C | B | B | B | B | A |
| 12 | Echa Aulia Putri | C | B | C | C | C | B | D | B | B | B | C | B | C | B | C | B | B | B | B | A |
| 13 | Erly Arnisa | C | B | C | C | C | B | B | B | B | C | C | B | C | C | C | B | B | B | C | A |
| 14 | Fadlan Farizki | C | B | C | C | C | B | D | B | B | B | C | B | C | B | C | B | B | B | B | A |
| 15 | Hafni Izzudin Fauzi | C | C | C | C | C | B | D | B | B | B | D | B | C | B | C | B | B | B | B | A |
| 16 | Hikmah Nastiti | C | B | C | C | C | B | D | B | B | B | C | A | C | B | C | B | B | B | B | A |
| 17 | Kevin Angga K | C | B | C | B | C | B | E | B | B | B | C | B | C | B | C | B | B | B | B | A |
| 18 | Maula Phidy | C | B | C | C | A | B | B | A | B | B | A | B | D | B | C | B | B | B | A | A |
| 19 | Muhammad Hilal Ali | C | B | C | C | C | B | D | B | B | B | C | B | C | B | C | B | B | B | B | A |
| 20 | Naila Ayu Ramadani | C | B | C | C | C | B | D | B | B | B | C | B | C | C | B | C | B | B | B | A |
| 21 | Nalendra Satya P | C | B | C | C | C | B | D | B | C | B | C | B | C | B | C | B | B | D | D | A |
| 22 | Queenara Salsabilla | C | B | C | C | C | C | D | B | B | B | C | B | C | B | C | B | B | B | B | A |
| 21 | Rafel Ramadhan P | C | B | C | C | C | B | D | B | B | B | C | B | C | B | C | B | B | B | B | A |
| 24 | Rayhan Ardiyanata | C | B | C | C | C | D | D | A | B | A | C | B | B | B | C | B | B | B | B | A |
| 25 | Reza Adi Saputra | C | B | A | C | C | B | C | B | B | B | E | B | C | B | C | B | B | B | B | D |
| 26 | Rifqi Kusuma W | C | B | C | C | C | B | B | C | B | C | C | B | C | C | B | B | B | B | B | A |
| 27 | Ririn Okta Toifah | C | B | B | C | C | B | D | A | B | B | C | B | C | B | C | B | B | B | B | A |
| 28 | Yuda Pratama | C | B | C | C | C | C | D | B | B | B | C | B | C | B | C | B | B | B | B | A |

Jumlah siswa yang memilih jawaban

| Item | Nomor Soal | | | | | | | | | | | | | | | | | | | |
|------|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| A | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 3 | 2 | 1 | 1 | 3 | 3 | 5 | 1 | 0 | 0 | 0 | 1 | 25 |
| B | 0 | 27 | 1 | 1 | 0 | 26 | 0 | 24 | 25 | 25 | 3 | 23 | 2 | 18 | 3 | 27 | 28 | 27 | 25 | 2 |
| C | 28 | 1 | 26 | 27 | 27 | 2 | 1 | 0 | 1 | 2 | 22 | 2 | 23 | 3 | 24 | 1 | 0 | 0 | 1 | 0 |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Tabel Analisis Distraktor (Pengecoh)

| No soal | Jawaban | | | | | Keterangan |
|---------|---------|-----|------|-----|----|--|
| | A | B | C | D | E | |
| 1 | 0% | 0% | 100% | 0% | 0% | Distraktor C diterima, dan A, B,D, E ditolak |
| 2 | 0% | 96% | 4% | 0% | 0% | Distraktor B,C diterima dan A,D,E ditolak |
| 3 | 4% | 4% | 92% | 0% | 0% | Distraktor A,B,C diterima dan D, E ditolak |
| 4 | 0% | 4% | 96% | 5% | 0% | Distraktor B, C, D diterima dan A, E ditolak |
| 5 | 4% | 0% | 96% | 0% | 0% | Distraktor A, C diterima dan B, D E ditolak |
| 6 | 0% | 92% | 8% | 0% | 0% | Distraktor B, C diterima dan A, D, E ditolak |
| 7 | 0% | 0% | 4% | 88% | 8% | Distraktor C, D, E diterima dan A, B ditolak |
| 8 | 10% | 86% | 0% | 0% | 4% | Distraktor A, B, E diterima dan C, D ditolak |
| 9 | 8% | 88% | 4% | 0% | 0% | Distraktor A, B, C diterima dan D, E ditolak |
| 10 | 4% | 88% | 8% | 0% | 0% | Distraktor A, B, C diterima dan D, E ditolak |
| 11 | 4% | 10% | 78% | 4% | 4% | Distraktor A,B,C,D dan E diterima |
| 12 | 10% | 82% | 8% | 0% | 0% | Distraktor A, B, C diterima dan D, E ditolak |

| | | | | | | |
|----|-----|------|-----|----|----|--|
| 13 | 10% | 8% | 82% | 0% | 0% | Distraktor A, B, C diterima dan D, E ditolak |
| 14 | 17% | 64% | 10% | 3% | 0% | Distraktor A,B, C diterima dan D, E ditolak |
| 15 | 3% | 10% | 87% | 0% | 0% | Distraktor B, C diterima dan A,D, E ditolak |
| 16 | 0% | 96% | 4% | 0% | 0% | Distraktor B, C diterima dan A, D, E ditolak |
| 17 | 0% | 100% | 0% | 0% | 0% | Distraktor B diterima dan A,C,D,E ditolak |
| 18 | 0% | 96% | 0% | 4% | 0% | Distraktor B, D diterima dan A,C, E ditolak |
| 19 | 4% | 89% | 4% | 3% | 0% | Distraktor A,B,C diterima dan D, E ditolak |
| 20 | 89% | 8% | 3% | 0% | 0% | Distraktor A, B diterima dan C, D, E ditolak |

| Case Processing Summary | | | |
|--------------------------------|-----------------------|----|-------|
| | | N | % |
| Cases | Valid | 28 | 100,0 |
| | Excluded ^a | 0 | 0,0 |
| | Total | 28 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

| Reliability Statistics | |
|-------------------------------|------------|
| Cronbach's Alpha | N of Items |
| 0,587 | 26 |