**Ключ1**

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| **№ п/п** | **№ задания** | **Ответ** |
| 1 | [13604](https://chem-ege.sdamgia.ru/problem?id=13604) | 14 |
| 2 | [13605](https://chem-ege.sdamgia.ru/problem?id=13605) | 342 |
| 3 | [13606](https://chem-ege.sdamgia.ru/problem?id=13606) | 13 |
| 4 | [7810](https://chem-ege.sdamgia.ru/problem?id=7810) | 15|51 |
| 5 | [30411](https://chem-ege.sdamgia.ru/problem?id=30411) | 375 |
| 6 | [13013](https://chem-ege.sdamgia.ru/problem?id=13013) | 24 |
| 7 | [12632](https://chem-ege.sdamgia.ru/problem?id=12632) | 3245 |
| 8 | [13015](https://chem-ege.sdamgia.ru/problem?id=13015) | 1526 |
| 9 | [13876](https://chem-ege.sdamgia.ru/problem?id=13876) | 43 |
| 10 | [12600](https://chem-ege.sdamgia.ru/problem?id=12600) | 432 |
| 11 | [8463](https://chem-ege.sdamgia.ru/problem?id=8463) | 25|52 |
| 12 | [8649](https://chem-ege.sdamgia.ru/problem?id=8649) | 25|52 |
| 13 | [12604](https://chem-ege.sdamgia.ru/problem?id=12604) | 25 |
| 14 | [13693](https://chem-ege.sdamgia.ru/problem?id=13693) | 5324 |
| 15 | [13694](https://chem-ege.sdamgia.ru/problem?id=13694) | 5412 |
| 16 | [11079](https://chem-ege.sdamgia.ru/problem?id=11079) | 23 |
| 17 | [8033](https://chem-ege.sdamgia.ru/problem?id=8033) | 15|51 |
| 18 | [20763](https://chem-ege.sdamgia.ru/problem?id=20763) | 14|41 |
| 19 | [14574](https://chem-ege.sdamgia.ru/problem?id=14574) | 123 |
| 20 | [304](https://chem-ege.sdamgia.ru/problem?id=304) | 1341 |
| 21 | [28912](https://chem-ege.sdamgia.ru/problem?id=28912) | 1234 |
| 22 | [13662](https://chem-ege.sdamgia.ru/problem?id=13662) | 2112 |
| 23 | [30429](https://chem-ege.sdamgia.ru/problem?id=30429) | 63 |
| 24 | [4458](https://chem-ege.sdamgia.ru/problem?id=4458) | 3243 |
| 25 | [9163](https://chem-ege.sdamgia.ru/problem?id=9163) | 3421 |
| 26 | [19651](https://chem-ege.sdamgia.ru/problem?id=19651) | 49,2 |
| 27 | [9715](https://chem-ege.sdamgia.ru/problem?id=9715) | 45 |
| 28 | [6561](https://chem-ege.sdamgia.ru/problem?id=6561) | 9,0 |

**Ключ2**

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| **№ п/п** | **№ задания** | **Ответ** |
| 1 | [20372](https://chem-ege.sdamgia.ru/problem?id=20372) | 23 |
| 2 | [20373](https://chem-ege.sdamgia.ru/problem?id=20373) | 234 |
| 3 | [20374](https://chem-ege.sdamgia.ru/problem?id=20374) | 14 |
| 4 | [8236](https://chem-ege.sdamgia.ru/problem?id=8236) | 25|52 |
| 5 | [28798](https://chem-ege.sdamgia.ru/problem?id=28798) | 856 |
| 6 | [13110](https://chem-ege.sdamgia.ru/problem?id=13110) | 52 |
| 7 | [1080](https://chem-ege.sdamgia.ru/problem?id=1080) | 5421 |
| 8 | [11323](https://chem-ege.sdamgia.ru/problem?id=11323) | 3165 |
| 9 | [13648](https://chem-ege.sdamgia.ru/problem?id=13648) | 32 |
| 10 | [26129](https://chem-ege.sdamgia.ru/problem?id=26129) | 231 |
| 11 | [7958](https://chem-ege.sdamgia.ru/problem?id=7958) | 25|52 |
| 12 | [8667](https://chem-ege.sdamgia.ru/problem?id=8667) | 24|42 |
| 13 | [8357](https://chem-ege.sdamgia.ru/problem?id=8357) | 14|41 |
| 14 | [12371](https://chem-ege.sdamgia.ru/problem?id=12371) | 5246 |
| 15 | [14646](https://chem-ege.sdamgia.ru/problem?id=14646) | 2265 |
| 16 | [18042](https://chem-ege.sdamgia.ru/problem?id=18042) | 42 |
| 17 | [8041](https://chem-ege.sdamgia.ru/problem?id=8041) | 24|42 |
| 18 | [8295](https://chem-ege.sdamgia.ru/problem?id=8295) | 13|31 |
| 19 | [303](https://chem-ege.sdamgia.ru/problem?id=303) | 2432 |
| 20 | [24312](https://chem-ege.sdamgia.ru/problem?id=24312) | 2361 |
| 21 | [30463](https://chem-ege.sdamgia.ru/problem?id=30463) | 1234 |
| 22 | [21056](https://chem-ege.sdamgia.ru/problem?id=21056) | 2122 |
| 23 | [29002](https://chem-ege.sdamgia.ru/problem?id=29002) | 32 |
| 24 | [7499](https://chem-ege.sdamgia.ru/problem?id=7499) | 2212 |
| 26 | [24996](https://chem-ege.sdamgia.ru/problem?id=24996) | 37 |
| 27 | [6266](https://chem-ege.sdamgia.ru/problem?id=6266) | 72 |
| 28 | [12384](https://chem-ege.sdamgia.ru/problem?id=12384) | 33,8 |

**Ключ3**

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| **№ п/п** | **№ задания** | **Ответ** |
| 1 | [32255](https://chem-ege.sdamgia.ru/problem?id=32255) | 14 |
| 2 | [32256](https://chem-ege.sdamgia.ru/problem?id=32256) | 314 |
| 3 | [32257](https://chem-ege.sdamgia.ru/problem?id=32257) | 25 |
| 4 | [7291](https://chem-ege.sdamgia.ru/problem?id=7291) | 25|52 |
| 5 | [28801](https://chem-ege.sdamgia.ru/problem?id=28801) | 437 |
| 6 | [9416](https://chem-ege.sdamgia.ru/problem?id=9416) | 32 |
| 7 | [1295](https://chem-ege.sdamgia.ru/problem?id=1295) | 3215 |
| 8 | [2012](https://chem-ege.sdamgia.ru/problem?id=2012) | 2435 |
| 9 | [9731](https://chem-ege.sdamgia.ru/problem?id=9731) | 25 |
| 10 | [8108](https://chem-ege.sdamgia.ru/problem?id=8108) | 413 |
| 11 | [7964](https://chem-ege.sdamgia.ru/problem?id=7964) | 25|52 |
| 12 | [8855](https://chem-ege.sdamgia.ru/problem?id=8855) | 14|41 |
| 13 | [24436](https://chem-ege.sdamgia.ru/problem?id=24436) | 24|42 |
| 14 | [12406](https://chem-ege.sdamgia.ru/problem?id=12406) | 6241 |
| 15 | [11331](https://chem-ege.sdamgia.ru/problem?id=11331) | 4156 |
| 16 | [24987](https://chem-ege.sdamgia.ru/problem?id=24987) | 42 |
| 17 | [8533](https://chem-ege.sdamgia.ru/problem?id=8533) | 14|41 |
| 18 | [8136](https://chem-ege.sdamgia.ru/problem?id=8136) | 14|41 |
| 19 | [11300](https://chem-ege.sdamgia.ru/problem?id=11300) | 242 |
| 20 | [433](https://chem-ege.sdamgia.ru/problem?id=433) | 2211 |
| 21 | [28911](https://chem-ege.sdamgia.ru/problem?id=28911) | 4321 |
| 22 | [13554](https://chem-ege.sdamgia.ru/problem?id=13554) | 3231 |
| 23 | [28984](https://chem-ege.sdamgia.ru/problem?id=28984) | 53 |
| 24 | [3985](https://chem-ege.sdamgia.ru/problem?id=3985) | 4523 |
| 25 | [9158](https://chem-ege.sdamgia.ru/problem?id=9158) | 2134 |
| 26 | [6611](https://chem-ege.sdamgia.ru/problem?id=6611) | 25 |
| 27 | [20771](https://chem-ege.sdamgia.ru/problem?id=20771) | 141,5 |
| 28 | [10405](https://chem-ege.sdamgia.ru/problem?id=10405) | 14 |

**Ключ4**

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| **№ п/п** | **№ задания** | **Ответ** |
| 1 | [19590](https://chem-ege.sdamgia.ru/problem?id=19590) | 35 |
| 2 | [19591](https://chem-ege.sdamgia.ru/problem?id=19591) | 153 |
| 3 | [19592](https://chem-ege.sdamgia.ru/problem?id=19592) | 23 |
| 4 | [13072](https://chem-ege.sdamgia.ru/problem?id=13072) | 34 |
| 5 | [28817](https://chem-ege.sdamgia.ru/problem?id=28817) | 185 |
| 6 | [19596](https://chem-ege.sdamgia.ru/problem?id=19596) | 32 |
| 7 | [12846](https://chem-ege.sdamgia.ru/problem?id=12846) | 5132 |
| 8 | [13077](https://chem-ege.sdamgia.ru/problem?id=13077) | 3256 |
| 9 | [13613](https://chem-ege.sdamgia.ru/problem?id=13613) | 32 |
| 10 | [8113](https://chem-ege.sdamgia.ru/problem?id=8113) | 342 |
| 11 | [13615](https://chem-ege.sdamgia.ru/problem?id=13615) | 13|31 |
| 12 | [8884](https://chem-ege.sdamgia.ru/problem?id=8884) | 14|41 |
| 13 | [11221](https://chem-ege.sdamgia.ru/problem?id=11221) | 15 |
| 14 | [14609](https://chem-ege.sdamgia.ru/problem?id=14609) | 2145 |
| 15 | [19606](https://chem-ege.sdamgia.ru/problem?id=19606) | 5412 |
| 16 | [13621](https://chem-ege.sdamgia.ru/problem?id=13621) | 41 |
| 17 | [8039](https://chem-ege.sdamgia.ru/problem?id=8039) | 24|42 |
| 18 | [8146](https://chem-ege.sdamgia.ru/problem?id=8146) | 25|52 |
| 19 | [9624](https://chem-ege.sdamgia.ru/problem?id=9624) | 1433 |
| 20 | [132](https://chem-ege.sdamgia.ru/problem?id=132) | 3511 |
| 21 | [28920](https://chem-ege.sdamgia.ru/problem?id=28920) | 4321 |
| 22 | [20767](https://chem-ege.sdamgia.ru/problem?id=20767) | 2113 |
| 23 | [30465](https://chem-ege.sdamgia.ru/problem?id=30465) | 64 |
| 24 | [11304](https://chem-ege.sdamgia.ru/problem?id=11304) | 1521 |
| 25 | [11052](https://chem-ege.sdamgia.ru/problem?id=11052) | 132 |
| 26 | [15625](https://chem-ege.sdamgia.ru/problem?id=15625) | 11 |
| 27 | [13666](https://chem-ege.sdamgia.ru/problem?id=13666) | 208 |
| 28 | [11090](https://chem-ege.sdamgia.ru/problem?id=11090) | 32,8 |

**Ключ5**

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| **№ п/п** | **№ задания** | **Ответ** |
| 1 | [19625](https://chem-ege.sdamgia.ru/problem?id=19625) | 23 |
| 2 | [19626](https://chem-ege.sdamgia.ru/problem?id=19626) | 354 |
| 3 | [19627](https://chem-ege.sdamgia.ru/problem?id=19627) | 24 |
| 4 | [20747](https://chem-ege.sdamgia.ru/problem?id=20747) | 15|51 |
| 5 | [30868](https://chem-ege.sdamgia.ru/problem?id=30868) | 874 |
| 6 | [18170](https://chem-ege.sdamgia.ru/problem?id=18170) | 15 |
| 7 | [10423](https://chem-ege.sdamgia.ru/problem?id=10423) | 3124 |
| 8 | [4255](https://chem-ege.sdamgia.ru/problem?id=4255) | 3245 |
| 9 | [20346](https://chem-ege.sdamgia.ru/problem?id=20346) | 41 |
| 10 | [8098](https://chem-ege.sdamgia.ru/problem?id=8098) | 324 |
| 11 | [8449](https://chem-ege.sdamgia.ru/problem?id=8449) | 34|43 |
| 12 | [10428](https://chem-ege.sdamgia.ru/problem?id=10428) | 23|32 |
| 13 | [13653](https://chem-ege.sdamgia.ru/problem?id=13653) | 35|53 |
| 14 | [12605](https://chem-ege.sdamgia.ru/problem?id=12605) | 2146 |
| 15 | [13023](https://chem-ege.sdamgia.ru/problem?id=13023) | 2461 |
| 16 | [13695](https://chem-ege.sdamgia.ru/problem?id=13695) | 23 |
| 17 | [8514](https://chem-ege.sdamgia.ru/problem?id=8514) | 15|51 |
| 18 | [8342](https://chem-ege.sdamgia.ru/problem?id=8342) | 13|31 |
| 19 | [131](https://chem-ege.sdamgia.ru/problem?id=131) | 2461 |
| 20 | [2442](https://chem-ege.sdamgia.ru/problem?id=2442) | 4225 |
| 21 | [30013](https://chem-ege.sdamgia.ru/problem?id=30013) | 3412 |
| 22 | [13127](https://chem-ege.sdamgia.ru/problem?id=13127) | 1223 |
| 23 | [30257](https://chem-ege.sdamgia.ru/problem?id=30257) | 25 |
| 24 | [4378](https://chem-ege.sdamgia.ru/problem?id=4378) | 4121 |
| 25 | [7239](https://chem-ege.sdamgia.ru/problem?id=7239) | 5412 |
| 26 | [13130](https://chem-ege.sdamgia.ru/problem?id=13130) | 53,2 |
| 27 | [11377](https://chem-ege.sdamgia.ru/problem?id=11377) | 24 |
| 28 | [13559](https://chem-ege.sdamgia.ru/problem?id=13559) | 20 |