

# RECTAS Y ÁNGULOS

## OPERACIONES CON ÁNGULOS:

Pasa a forma incompleja:

1.  $21^{\circ} 32' 1''$
2.  $45^{\circ} 12' 52''$
3.  $90^{\circ} 4' 34''$
4.  $120^{\circ} 3' 6''$
5.  $205^{\circ} 5' 23''$

Pasa a forma compleja:

6.  $3.705''$
7.  $742''$
8.  $92.312''$
9.  $123.230''$
10.  $13.129''$

Halla el ángulo complementario:

11.  $21^{\circ} 32' 10''$
12.  $45^{\circ} 12' 45''$
13.  $89^{\circ} 4' 56''$
14.  $20^{\circ} 12' 37''$
15.  $75^{\circ} 32' 29''$

Halla el ángulo suplementario:

16.  $21^{\circ} 32' 1''$
17.  $45^{\circ} 12' 52''$
18.  $90^{\circ} 13' 51''$
19.  $120^{\circ} 3' 6''$
20.  $135^{\circ} 16' 23''$

Calcula:

21.  $91^{\circ} 5' 23'' + 4^{\circ} 56' 42''$
22.  $12^{\circ} 12' 12'' + 51^{\circ} 24' 49''$
23.  $35^{\circ} 45' 25'' + 18^{\circ} 39' 20''$
24.  $164^{\circ} 8' 37'' + 178^{\circ} 3' 57''$
25.  $834^{\circ} 15' 52'' + 71^{\circ} 58' 53''$
26.  $62^{\circ} 5' 23'' - 23^{\circ} 12' 35''$
27.  $24^{\circ} 1' 53'' - 12^{\circ} 41' 53''$
28.  $45^{\circ} 12' 46'' - 23^{\circ} 54' 50''$
29.  $23^{\circ} 32' 56'' - 20^{\circ} 34' 59''$
30.  $123^{\circ} 23' 56'' - 93^{\circ} 53' 35''$
31.  $(12^{\circ} 35' 46'')$ . 2
32.  $(4^{\circ} 25' 13'')$ . 4
33.  $(124^{\circ} 12' 25'')$ . 3
34.  $(72^{\circ} 43' 13'')$ . 5
35.  $(32^{\circ} 31' 24'')$ : 2
36.  $(12^{\circ} 42' 51'')$ : 3
37.  $(83^{\circ} 34' 48'')$ : 4
38.  $(121^{\circ} 23' 35'')$ : 5
39.  $(35^{\circ} 23' 15'') + (43^{\circ} 12' 44'') - (72^{\circ} 23' 30'')$
40.  $(12^{\circ} 35' 45'' - 7^{\circ} 15' 30'')$ . 2
41.  $(23^{\circ} 13' 3'' + 13^{\circ} 12' 42'')$ . 3
42.  $(70^{\circ} 25' 18'')$ : 3
43.  $17^{\circ} 35' 24'' + 42^{\circ} 13' 27'' + 86^{\circ} 15' 58''$
44.  $17^{\circ} 23' 33'' + 25^{\circ} 45' 18'' + 34^{\circ} 14' 30''$
45.  $17^{\circ} 35' 24'' + 42^{\circ} 13' 27'' - 56^{\circ} 15' 58''$
46.  $17^{\circ} 23' 33'' + 25^{\circ} 45' 18'' - 34^{\circ} 14' 30''$
47.  $13^{\circ} 25' 32'' + 2 \cdot (3^{\circ} 35' 54'')$
48.  $15^{\circ} 37' 17'' + 2 \cdot (6^{\circ} 47' 8'')$
49.  $12^{\circ} 45' 32'' + 2 \cdot (13^{\circ} 23' 54'' - 9^{\circ} 45' 30'')$
50.  $23^{\circ} 57' 27'' + 3 \cdot (23^{\circ} 23' 53'' - 22^{\circ} 12' 24'')$

## SOLUCIONES:

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|---------------------------|----------------------------|----------------------------|----------------------------|
| 1. $77.521''$             | 14. $69^{\circ} 47' 23''$  | 27. $11^{\circ} 20' 0''$   | 40. $10^{\circ} 40' 30''$  |
| 2. $162.772''$            | 15. $14^{\circ} 27' 31''$  | 28. $21^{\circ} 17' 56''$  | 41. $109^{\circ} 17' 15''$ |
| 3. $324.274''$            | 16. $158^{\circ} 27' 59''$ | 29. $2^{\circ} 57' 57''$   | 42. $23^{\circ} 28' 26''$  |
| 4. $432.186''$            | 17. $134^{\circ} 47' 8''$  | 30. $29^{\circ} 30' 21''$  | 43. $146^{\circ} 4' 49''$  |
| 5. $738.323''$            | 18. $89^{\circ} 46' 9''$   | 31. $25^{\circ} 11' 32''$  | 44. $77^{\circ} 23' 21''$  |
| 6. $1^{\circ} 1' 45''$    | 19. $59^{\circ} 56' 9''$   | 32. $17^{\circ} 40' 52''$  | 45. $3^{\circ} 32' 53''$   |
| 7. $12' 22''$             | 20. $44^{\circ} 43' 37''$  | 33. $372^{\circ} 37' 15''$ | 46. $8^{\circ} 54' 21''$   |
| 8. $25^{\circ} 38' 32''$  | 21. $96^{\circ} 2' 5''$    | 34. $363^{\circ} 36' 5''$  | 47. $20^{\circ} 37' 20''$  |
| 9. $34^{\circ} 13' 50''$  | 22. $63^{\circ} 37' 1''$   | 35. $16^{\circ} 15' 42''$  | 48. $29^{\circ} 11' 33''$  |
| 10. $3^{\circ} 38' 49''$  | 23. $54^{\circ} 24' 45''$  | 36. $4^{\circ} 14' 17''$   | 49. $20^{\circ} 2' 20''$   |
| 11. $68^{\circ} 27' 50''$ | 24. $342^{\circ} 12' 34''$ | 37. $20^{\circ} 53' 42''$  | 50. $20^{\circ} 2' 20''$   |
| 12. $44^{\circ} 47' 15''$ | 25. $906^{\circ} 14' 45''$ | 38. $24^{\circ} 16' 43''$  |                            |
| 13. $55' 4''$             | 26. $38^{\circ} 52' 48''$  | 39. $6^{\circ} 12' 29''$   |                            |