

三角不等式 1 の解答

氏名 _____

1. $0^\circ \leq \theta < 360^\circ$ のとき、次の不等式を解け。

(1) $\sin \theta \geq \frac{\sqrt{3}}{2}$

答. $60^\circ \leq \theta \leq 120^\circ$

(2) $\sin \theta \geq -\frac{1}{2}$

答. $0^\circ \leq \theta \leq 210^\circ, 330^\circ \leq \theta < 360^\circ$

(3) $\sin \theta < -\frac{\sqrt{2}}{2}$

答. $225^\circ < \theta < 315^\circ$

(4) $\sin \theta > 0$

答. $0^\circ < \theta < 180^\circ$

(5) $\sin \theta < \frac{\sqrt{2}}{2}$

答. $0^\circ \leq \theta < 45^\circ, 135^\circ < \theta < 360^\circ$

(6) $\sin \theta \geq \frac{1}{2}$

答. $30^\circ \leq \theta \leq 150^\circ$

(7) $\sin \theta \leq 0$

答. $0^\circ, 180^\circ \leq \theta < 360^\circ$

(8) $\cos \theta \geq \frac{\sqrt{2}}{2}$

答. $0^\circ \leq \theta \leq 45^\circ, 315^\circ \leq \theta < 360^\circ$

(9) $\cos \theta > -\frac{1}{2}$

答. $0^\circ \leq \theta < 120^\circ, 240^\circ < \theta < 360^\circ$

(10) $\cos \theta \leq -\frac{\sqrt{2}}{2}$

答. $135^\circ \leq \theta \leq 225^\circ$

(11) $\cos \theta \geq -\frac{1}{2}$

答. $0^\circ \leq \theta \leq 120^\circ, 240^\circ \leq \theta < 360^\circ$

(12) $\cos \theta \geq \frac{\sqrt{3}}{2}$

答. $0^\circ \leq \theta \leq 30^\circ, 330^\circ \leq \theta < 360^\circ$

(13) $\cos \theta < 0$

答. $90^\circ < \theta < 270^\circ$

(14) $\cos \theta \geq 0$

答. $0^\circ \leq \theta \leq 90^\circ, 270^\circ \leq \theta < 360^\circ$

(15) $\tan \theta \geq -\frac{\sqrt{3}}{3}$

答. $0^\circ \leq \theta < 90^\circ, 150^\circ \leq \theta < 270^\circ, 330^\circ \leq \theta < 360^\circ$

(16) $\tan \theta \geq -1$

答. $0^\circ \leq \theta < 90^\circ, 135^\circ \leq \theta < 270^\circ, 315^\circ \leq \theta < 360^\circ$

(17) $\tan \theta \geq -\sqrt{3}$

答. $0^\circ \leq \theta < 90^\circ, 120^\circ \leq \theta < 270^\circ, 300^\circ \leq \theta < 360^\circ$

(18) $\tan \theta \geq \sqrt{3}$

答. $60^\circ \leq \theta < 90^\circ, 240^\circ \leq \theta < 270^\circ$

(19) $\tan \theta \leq -\sqrt{3}$

答. $90^\circ < \theta \leq 120^\circ, 270^\circ < \theta \leq 300^\circ$

(20) $\tan \theta \geq \frac{\sqrt{3}}{3}$

答. $30^\circ \leq \theta < 90^\circ, 210^\circ \leq \theta < 270^\circ$

三角不等式 2 の解答

氏名 _____

1. $0^\circ \leq \theta < 360^\circ$ のとき、次の不等式を解け。

(1) $\sin \theta \geq \frac{\sqrt{2}}{2}$

答. $45^\circ \leq \theta \leq 135^\circ$

(2) $\sin \theta < \frac{\sqrt{3}}{2}$

答. $0^\circ \leq \theta < 60^\circ, 120^\circ < \theta < 360^\circ$

(3) $\sin \theta \leq \frac{\sqrt{2}}{2}$

答. $0^\circ \leq \theta \leq 45^\circ, 135^\circ \leq \theta < 360^\circ$

(4) $\sin \theta > 0$

答. $0^\circ < \theta < 180^\circ$

(5) $\sin \theta \geq \frac{1}{2}$

答. $30^\circ \leq \theta \leq 150^\circ$

(6) $\sin \theta \leq -\frac{1}{2}$

答. $210^\circ \leq \theta \leq 330^\circ$

(7) $\sin \theta \geq 0$

答. $0^\circ \leq \theta \leq 180^\circ$

(8) $\cos \theta \geq -\frac{1}{2}$

答. $0^\circ \leq \theta \leq 120^\circ, 240^\circ \leq \theta < 360^\circ$

(9) $\cos \theta \geq -\frac{\sqrt{3}}{2}$

答. $0^\circ \leq \theta \leq 150^\circ, 210^\circ \leq \theta < 360^\circ$

(10) $\cos \theta \leq -\frac{\sqrt{2}}{2}$

答. $135^\circ \leq \theta \leq 225^\circ$

(11) $\cos \theta > \frac{1}{2}$

答. $0^\circ \leq \theta < 60^\circ, 300^\circ < \theta < 360^\circ$

(12) $\cos \theta < -\frac{\sqrt{3}}{2}$

答. $150^\circ < \theta < 210^\circ$

(13) $\cos \theta > \frac{\sqrt{3}}{2}$

答. $0^\circ \leq \theta < 30^\circ, 330^\circ < \theta < 360^\circ$

(14) $\tan \theta \geq 0$

答. $0^\circ \leq \theta < 90^\circ, 180^\circ \leq \theta < 270^\circ$

(15) $\tan \theta > -\sqrt{3}$

答. $0^\circ \leq \theta < 90^\circ, 120^\circ < \theta < 270^\circ, 300^\circ < \theta < 360^\circ$

(16) $\tan \theta < 0$

答. $90^\circ < \theta < 180^\circ, 270^\circ < \theta < 360^\circ$

(17) $\tan \theta > -1$

答. $0^\circ \leq \theta < 90^\circ, 135^\circ < \theta < 270^\circ, 315^\circ < \theta < 360^\circ$

(18) $\tan \theta \geq \frac{\sqrt{3}}{3}$

答. $30^\circ \leq \theta < 90^\circ, 210^\circ \leq \theta < 270^\circ$

(19) $\tan \theta < -1$

答. $90^\circ < \theta < 135^\circ, 270^\circ < \theta < 315^\circ$

(20) $\tan \theta > \sqrt{3}$

答. $60^\circ < \theta < 90^\circ, 240^\circ < \theta < 270^\circ$

三角不等式 3 の解答

氏名 _____

1. $0^\circ \leq \theta < 360^\circ$ のとき、次の不等式を解け。

(1) $\sin \theta \leq \frac{\sqrt{2}}{2}$

答. $0^\circ \leq \theta \leq 45^\circ, 135^\circ \leq \theta < 360^\circ$

(2) $\sin \theta > 0$

答. $0^\circ < \theta < 180^\circ$

(3) $\sin \theta < -\frac{\sqrt{2}}{2}$

答. $225^\circ < \theta < 315^\circ$

(4) $\sin \theta < -\frac{\sqrt{3}}{2}$

答. $240^\circ < \theta < 300^\circ$

(5) $\sin \theta < 0$

答. $180^\circ < \theta < 360^\circ$

(6) $\sin \theta \leq 0$

答. $0^\circ, 180^\circ \leq \theta < 360^\circ$

(7) $\cos \theta \geq -\frac{1}{2}$

答. $0^\circ \leq \theta \leq 120^\circ, 240^\circ \leq \theta < 360^\circ$

(8) $\cos \theta \leq \frac{1}{2}$

答. $60^\circ \leq \theta \leq 300^\circ$

(9) $\cos \theta \leq \frac{\sqrt{2}}{2}$

答. $45^\circ \leq \theta \leq 315^\circ$

(10) $\cos \theta \geq \frac{\sqrt{2}}{2}$

答. $0^\circ \leq \theta \leq 45^\circ, 315^\circ \leq \theta < 360^\circ$

(11) $\cos \theta \leq 0$

答. $90^\circ \leq \theta \leq 270^\circ$

(12) $\cos \theta \geq -\frac{\sqrt{3}}{2}$

答. $0^\circ \leq \theta \leq 150^\circ, 210^\circ \leq \theta < 360^\circ$

(13) $\cos \theta \leq -\frac{\sqrt{3}}{2}$

答. $150^\circ \leq \theta \leq 210^\circ$

(14) $\tan \theta > -\frac{\sqrt{3}}{3}$

答. $0^\circ \leq \theta < 90^\circ, 150^\circ < \theta < 270^\circ, 330^\circ < \theta < 360^\circ$

(15) $\tan \theta \geq -1$

答. $0^\circ \leq \theta < 90^\circ, 135^\circ \leq \theta < 270^\circ, 315^\circ \leq \theta < 360^\circ$

(16) $\tan \theta \leq \frac{\sqrt{3}}{3}$

答. $0^\circ \leq \theta \leq 30^\circ, 90^\circ < \theta \leq 210^\circ, 270^\circ < \theta < 360^\circ$

(17) $\tan \theta \leq -\sqrt{3}$

答. $90^\circ < \theta \leq 120^\circ, 270^\circ < \theta \leq 300^\circ$

(18) $\tan \theta > \frac{\sqrt{3}}{3}$

答. $30^\circ < \theta < 90^\circ, 210^\circ < \theta < 270^\circ$

(19) $\tan \theta \leq -\frac{\sqrt{3}}{3}$

答. $90^\circ < \theta \leq 150^\circ, 270^\circ < \theta \leq 330^\circ$

(20) $\tan \theta \geq 0$

答. $0^\circ \leq \theta < 90^\circ, 180^\circ \leq \theta < 270^\circ$

三角不等式 4 の解答

氏名 _____

1. $0^\circ \leq \theta < 360^\circ$ のとき、次の不等式を解け。

(1) $2 \sin \theta \geq 1$

答. $30^\circ \leq \theta \leq 150^\circ$

(2) $2 \sin \theta > -\sqrt{3}$

答. $0^\circ \leq \theta < 240^\circ, 300^\circ < \theta < 360^\circ$

(3) $2 \sin \theta - \sqrt{2} < 0$

答. $0^\circ \leq \theta < 45^\circ, 135^\circ < \theta < 360^\circ$

(4) $\sqrt{2} \sin \theta - 1 < 0$

答. $0^\circ \leq \theta < 45^\circ, 135^\circ < \theta < 360^\circ$

(5) $\sin \theta > 0$

答. $0^\circ < \theta < 180^\circ$

(6) $2 \sin \theta - \sqrt{2} > 0$

答. $45^\circ < \theta < 135^\circ$

(7) $2 \sin \theta + \sqrt{3} < 0$

答. $240^\circ < \theta < 300^\circ$

(8) $2 \cos \theta + 1 \leq 0$

答. $120^\circ \leq \theta \leq 240^\circ$

(9) $2 \cos \theta \geq \sqrt{3}$

答. $0^\circ \leq \theta \leq 30^\circ, 330^\circ \leq \theta < 360^\circ$

(10) $2 \cos \theta - \sqrt{3} < 0$

答. $30^\circ < \theta < 330^\circ$

(11) $2 \cos \theta < \sqrt{2}$

答. $45^\circ < \theta < 315^\circ$

(12) $2 \cos \theta - \sqrt{3} > 0$

答. $0^\circ \leq \theta < 30^\circ, 330^\circ < \theta < 360^\circ$

(13) $2 \cos \theta + \sqrt{3} < 0$

答. $150^\circ < \theta < 210^\circ$

(14) $2 \cos \theta - \sqrt{2} \leq 0$

答. $45^\circ \leq \theta \leq 315^\circ$

(15) $3 \tan \theta + \sqrt{3} \geq 0$

答. $0^\circ \leq \theta < 90^\circ, 150^\circ \leq \theta < 270^\circ, 330^\circ \leq \theta < 360^\circ$

(16) $\tan \theta \leq 0$

答. $0^\circ, 90^\circ < \theta \leq 180^\circ, 270^\circ < \theta < 360^\circ$

(17) $\tan \theta \leq 1$

答.

$0^\circ \leq \theta \leq 45^\circ, 90^\circ < \theta \leq 225^\circ, 270^\circ < \theta < 360^\circ$

(18) $3 \tan \theta - \sqrt{3} < 0$

答.

$0^\circ \leq \theta < 30^\circ, 90^\circ < \theta < 210^\circ, 270^\circ < \theta < 360^\circ$

(19) $3 \tan \theta < -\sqrt{3}$

答. $90^\circ < \theta < 150^\circ, 270^\circ < \theta < 330^\circ$

(20) $3 \tan \theta - \sqrt{3} > 0$

答. $30^\circ < \theta < 90^\circ, 210^\circ < \theta < 270^\circ$

三角不等式5の解答

氏名 _____

1. $0^\circ \leq \theta < 360^\circ$ のとき、次の不等式を解け。

(1) $2 \sin \theta - \sqrt{2} \leq 0$

答. $0^\circ \leq \theta \leq 45^\circ, 135^\circ \leq \theta < 360^\circ$

(2) $2 \sin \theta \geq -1$

答. $0^\circ \leq \theta \leq 210^\circ, 330^\circ \leq \theta < 360^\circ$

(3) $2 \sin \theta + \sqrt{3} > 0$

答. $0^\circ \leq \theta < 240^\circ, 300^\circ < \theta < 360^\circ$

(4) $2 \sin \theta \geq \sqrt{3}$

答. $60^\circ \leq \theta \leq 120^\circ$

(5) $2 \sin \theta + \sqrt{3} \geq 0$

答. $0^\circ \leq \theta \leq 240^\circ, 300^\circ \leq \theta < 360^\circ$

(6) $2 \sin \theta - 1 \geq 0$

答. $30^\circ \leq \theta \leq 150^\circ$

(7) $2 \sin \theta < -\sqrt{3}$

答. $240^\circ < \theta < 300^\circ$

(8) $2 \cos \theta \geq \sqrt{2}$

答. $0^\circ \leq \theta \leq 45^\circ, 315^\circ \leq \theta < 360^\circ$

(9) $2 \cos \theta < 1$

答. $60^\circ < \theta < 300^\circ$

(10) $\cos \theta \leq 0$

答. $90^\circ \leq \theta \leq 270^\circ$

(11) $2 \cos \theta + 1 \geq 0$

答. $0^\circ \leq \theta \leq 120^\circ, 240^\circ \leq \theta < 360^\circ$

(12) $\cos \theta \geq 0$

答. $0^\circ \leq \theta \leq 90^\circ, 270^\circ \leq \theta < 360^\circ$

(13) $2 \cos \theta + \sqrt{3} > 0$

答. $0^\circ \leq \theta < 150^\circ, 210^\circ < \theta < 360^\circ$

(14) $\tan \theta > -\sqrt{3}$

答. $0^\circ \leq \theta < 90^\circ, 120^\circ < \theta < 270^\circ, 300^\circ < \theta < 360^\circ$

(15) $\tan \theta + 1 \leq 0$

答. $90^\circ < \theta \leq 135^\circ, 270^\circ < \theta \leq 315^\circ$

(16) $\tan \theta - 1 < 0$

答.

$0^\circ \leq \theta < 45^\circ, 90^\circ < \theta < 225^\circ, 270^\circ < \theta < 360^\circ$

(17) $\tan \theta \leq 0$

答. $0^\circ, 90^\circ < \theta \leq 180^\circ, 270^\circ < \theta < 360^\circ$

(18) $3 \tan \theta + \sqrt{3} > 0$

答. $0^\circ \leq \theta < 90^\circ, 150^\circ < \theta < 270^\circ, 330^\circ < \theta < 360^\circ$

(19) $\tan \theta + \sqrt{3} \geq 0$

答. $0^\circ \leq \theta < 90^\circ, 120^\circ \leq \theta < 270^\circ, 300^\circ \leq \theta < 360^\circ$

(20) $\tan \theta \leq 1$

答.

$0^\circ \leq \theta \leq 45^\circ, 90^\circ < \theta \leq 225^\circ, 270^\circ < \theta < 360^\circ$

三角不等式 6 の解答

氏名 _____

1. $0^\circ \leq \theta < 360^\circ$ のとき、次の不等式を解け。

(1) $2 \sin \theta + \sqrt{2} > 0$

答. $0^\circ \leq \theta < 225^\circ, 315^\circ < \theta < 360^\circ$

(2) $2 \sin \theta + \sqrt{2} \geq 0$

答. $0^\circ \leq \theta \leq 225^\circ, 315^\circ \leq \theta < 360^\circ$

(3) $2 \sin \theta < \sqrt{2}$

答. $0^\circ \leq \theta < 45^\circ, 135^\circ < \theta < 360^\circ$

(4) $\sin \theta \geq 0$

答. $0^\circ \leq \theta \leq 180^\circ$

(5) $\sin \theta < 0$

答. $180^\circ < \theta < 360^\circ$

(6) $\sqrt{2} \sin \theta - 1 < 0$

答. $0^\circ \leq \theta < 45^\circ, 135^\circ < \theta < 360^\circ$

(7) $\sqrt{2} \cos \theta \leq -1$

答. $135^\circ \leq \theta \leq 225^\circ$

(8) $\cos \theta \geq 0$

答. $0^\circ \leq \theta \leq 90^\circ, 270^\circ \leq \theta < 360^\circ$

(9) $2 \cos \theta + \sqrt{3} < 0$

答. $150^\circ < \theta < 210^\circ$

(10) $2 \cos \theta \geq 1$

答. $0^\circ \leq \theta \leq 60^\circ, 300^\circ \leq \theta < 360^\circ$

(11) $2 \cos \theta - \sqrt{2} \leq 0$

答. $45^\circ \leq \theta \leq 315^\circ$

(12) $2 \cos \theta > -\sqrt{3}$

答. $0^\circ \leq \theta < 150^\circ, 210^\circ < \theta < 360^\circ$

(13) $2 \cos \theta \geq \sqrt{3}$

答. $0^\circ \leq \theta \leq 30^\circ, 330^\circ \leq \theta < 360^\circ$

(14) $\tan \theta < -1$

答. $90^\circ < \theta < 135^\circ, 270^\circ < \theta < 315^\circ$

(15) $\tan \theta \geq 1$

答. $45^\circ \leq \theta < 90^\circ, 225^\circ \leq \theta < 270^\circ$

(16) $\tan \theta + 1 \leq 0$

答. $90^\circ < \theta \leq 135^\circ, 270^\circ < \theta \leq 315^\circ$

(17) $\tan \theta < 0$

答. $90^\circ < \theta < 180^\circ, 270^\circ < \theta < 360^\circ$

(18) $\tan \theta + \sqrt{3} < 0$

答. $90^\circ < \theta < 120^\circ, 270^\circ < \theta < 300^\circ$

(19) $\tan \theta - \sqrt{3} > 0$

答. $60^\circ < \theta < 90^\circ, 240^\circ < \theta < 270^\circ$

(20) $\tan \theta \geq \sqrt{3}$

答. $60^\circ \leq \theta < 90^\circ, 240^\circ \leq \theta < 270^\circ$

三角不等式 7 の解答

氏名 _____

1. $0^\circ \leq \theta < 360^\circ$ のとき、次の不等式を解け。

(1) $\sin \theta \geq 0$

答. $0^\circ \leq \theta \leq 180^\circ$

(2) $\sin \theta > 0$

答. $0^\circ < \theta < 180^\circ$

(3) $\tan \theta \geq 0$

答. $0^\circ \leq \theta < 90^\circ, 180^\circ \leq \theta < 270^\circ$

(4) $2 \cos \theta \leq 1$

答. $60^\circ \leq \theta \leq 300^\circ$

(5) $3 \tan \theta - \sqrt{3} > 0$

答. $30^\circ < \theta < 90^\circ, 210^\circ < \theta < 270^\circ$

(6) $2 \sin \theta \leq 1$

答. $0^\circ \leq \theta \leq 30^\circ, 150^\circ \leq \theta < 360^\circ$

(7) $2 \cos \theta \leq \sqrt{3}$

答. $30^\circ \leq \theta \leq 330^\circ$

(8) $2 \sin \theta > \sqrt{3}$

答. $60^\circ < \theta < 120^\circ$

(9) $\sqrt{2} \sin \theta - 1 > 0$

答. $45^\circ < \theta < 135^\circ$

(10) $\sin \theta < 0$

答. $180^\circ < \theta < 360^\circ$

(11) $2 \sin \theta - 1 > 0$

答. $30^\circ < \theta < 150^\circ$

(12) $\tan \theta \geq -\sqrt{3}$

答. $0^\circ \leq \theta < 90^\circ, 120^\circ \leq \theta < 270^\circ, 300^\circ \leq \theta < 360^\circ$

(13) $2 \sin \theta < \sqrt{3}$

答. $0^\circ \leq \theta < 60^\circ, 120^\circ < \theta < 360^\circ$

(14) $\tan \theta > 0$

答. $0^\circ < \theta < 90^\circ, 180^\circ < \theta < 270^\circ$

(15) $3 \tan \theta - \sqrt{3} < 0$

答.

$0^\circ \leq \theta < 30^\circ, 90^\circ < \theta < 210^\circ, 270^\circ < \theta < 360^\circ$

(16) $2 \sin \theta < -\sqrt{2}$

答. $225^\circ < \theta < 315^\circ$

(17) $2 \cos \theta < \sqrt{2}$

答. $45^\circ < \theta < 315^\circ$

(18) $\cos \theta < 0$

答. $90^\circ < \theta < 270^\circ$

(19) $\tan \theta + 1 \geq 0$

答. $0^\circ \leq \theta < 90^\circ, 135^\circ \leq \theta < 270^\circ, 315^\circ \leq \theta < 360^\circ$

(20) $\tan \theta \leq 0$

答. $0^\circ, 90^\circ < \theta \leq 180^\circ, 270^\circ < \theta < 360^\circ$

三角不等式 8 の解答

氏名 _____

1. $0^\circ \leq \theta < 360^\circ$ のとき、次の不等式を解け。

(1) $2 \sin \theta + \sqrt{3} < 0$

答. $240^\circ < \theta < 300^\circ$

(2) $2 \sin \theta - \sqrt{3} > 0$

答. $60^\circ < \theta < 120^\circ$

(3) $3 \tan \theta - \sqrt{3} < 0$

答.

$0^\circ \leq \theta < 30^\circ, 90^\circ < \theta < 210^\circ, 270^\circ < \theta < 360^\circ$

(4) $\sqrt{2} \sin \theta \geq -1$

答. $0^\circ \leq \theta \leq 225^\circ, 315^\circ \leq \theta < 360^\circ$

(5) $\sin \theta \leq 0$

答. $0^\circ, 180^\circ \leq \theta < 360^\circ$

(6) $\sin \theta > 0$

答. $0^\circ < \theta < 180^\circ$

(7) $2 \sin \theta + 1 < 0$

答. $210^\circ < \theta < 330^\circ$

(8) $\tan \theta \geq 0$

答. $0^\circ \leq \theta < 90^\circ, 180^\circ \leq \theta < 270^\circ$

(9) $2 \cos \theta - 1 > 0$

答. $0^\circ \leq \theta < 60^\circ, 300^\circ < \theta < 360^\circ$

(10) $2 \sin \theta - \sqrt{2} \geq 0$

答. $45^\circ \leq \theta \leq 135^\circ$

(11) $2 \cos \theta + \sqrt{2} \leq 0$

答. $135^\circ \leq \theta \leq 225^\circ$

(12) $2 \cos \theta + \sqrt{3} \geq 0$

答. $0^\circ \leq \theta \leq 150^\circ, 210^\circ \leq \theta < 360^\circ$

(13) $\cos \theta \geq 0$

答. $0^\circ \leq \theta \leq 90^\circ, 270^\circ \leq \theta < 360^\circ$

(14) $2 \sin \theta + \sqrt{2} < 0$

答. $225^\circ < \theta < 315^\circ$

(15) $2 \cos \theta - \sqrt{3} < 0$

答. $30^\circ < \theta < 330^\circ$

(16) $2 \sin \theta > -\sqrt{3}$

答. $0^\circ \leq \theta < 240^\circ, 300^\circ < \theta < 360^\circ$

(17) $\tan \theta < 1$

答.

$0^\circ \leq \theta < 45^\circ, 90^\circ < \theta < 225^\circ, 270^\circ < \theta < 360^\circ$

(18) $\tan \theta \leq 0$

答. $0^\circ, 90^\circ < \theta \leq 180^\circ, 270^\circ < \theta < 360^\circ$

(19) $\sqrt{3} \tan \theta - 1 \leq 0$

答.

$0^\circ \leq \theta \leq 30^\circ, 90^\circ < \theta \leq 210^\circ, 270^\circ < \theta < 360^\circ$

(20) $\sqrt{2} \cos \theta - 1 \leq 0$

答. $45^\circ \leq \theta \leq 315^\circ$