



KURS TRYGONOMETRIA

LEKCJA 4 dla poziomu PODSTAWOWEGO + ROZSZERZONEGO

Funkcje trygonometryczne
dowolnego kąta

Odpowiedzi do zadania domowego

Część 1: TEST

- | | |
|------|-------|
| 1) d | 6) d |
| 2) c | 7) d |
| 3) b | 8) b |
| 4) b | 9) d |
| 5) c | 10) a |

ODPOWIEDZI DO ZADAŃ

Zad. 1

- a) $\sin \alpha = \frac{15}{17}$, $\cos \alpha = \frac{8}{17}$, $\operatorname{tg} \alpha = \frac{15}{8}$, $\operatorname{ctg} \alpha = \frac{8}{15}$
- b) $\sin \alpha = \frac{4}{5}$, $\cos \alpha = -\frac{3}{5}$, $\operatorname{tg} \alpha = -\frac{4}{3}$, $\operatorname{ctg} \alpha = -\frac{3}{4}$
- c) $\sin \alpha = -\frac{12}{13}$, $\cos \alpha = -\frac{5}{12}$, $\operatorname{tg} \alpha = \frac{12}{5}$, $\operatorname{ctg} \alpha = \frac{5}{12}$
- d) $\sin \alpha = -\frac{7}{25}$, $\cos \alpha = \frac{24}{25}$, $\operatorname{tg} \alpha = -\frac{7}{24}$, $\operatorname{ctg} \alpha = -\frac{24}{7}$

Zad. 2

- a) $x = -12$
- b) $x = 7$
- c) $y = -24$
- d) $y = -12$

Zad. 3

- a) $P = (48, 14)$
- b) $P = (-48, -20)$
- c) $P = (2\sqrt{5}, -\sqrt{5})$
- d) $P = (-\sqrt{3}, 1)$

Zad. 4

- a) $\sin 120^\circ = \frac{\sqrt{3}}{2}$, $\cos 120^\circ = -\frac{1}{2}$, $\operatorname{tg} 120^\circ = -\sqrt{3}$, $\operatorname{ctg} 120^\circ = -\frac{\sqrt{3}}{3}$
- b) $\sin 135^\circ = \frac{\sqrt{2}}{2}$, $\cos 135^\circ = -\frac{\sqrt{2}}{2}$, $\operatorname{tg} 135^\circ = -1$, $\operatorname{ctg} 135^\circ = -1$
- c) $\sin 150^\circ = \frac{1}{2}$, $\cos 150^\circ = -\frac{\sqrt{3}}{2}$, $\operatorname{tg} 150^\circ = -\frac{\sqrt{3}}{3}$, $\operatorname{ctg} 150^\circ = -\sqrt{3}$
- d) $\sin 210^\circ = -\frac{1}{2}$, $\cos 210^\circ = -\frac{\sqrt{3}}{2}$, $\operatorname{tg} 210^\circ = \frac{\sqrt{3}}{3}$, $\operatorname{ctg} 210^\circ = \sqrt{3}$
- e) $\sin 225^\circ = -\frac{\sqrt{2}}{2}$, $\cos 225^\circ = -\frac{\sqrt{2}}{2}$, $\operatorname{tg} 225^\circ = 1$, $\operatorname{ctg} 225^\circ = 1$

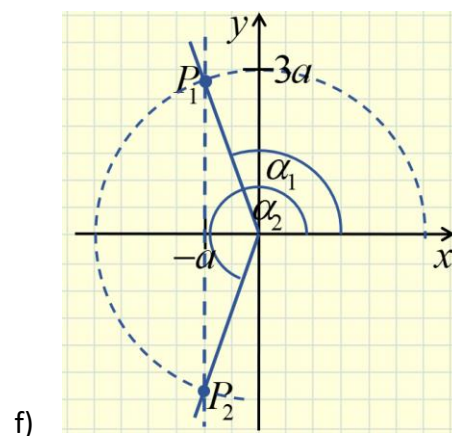
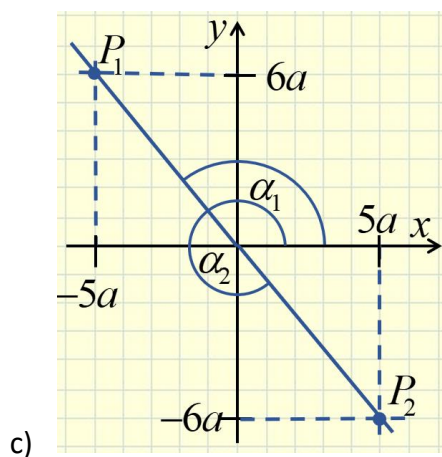
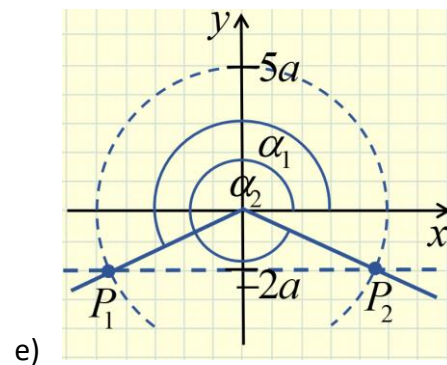
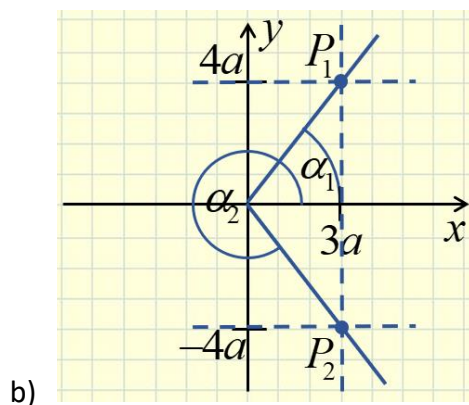
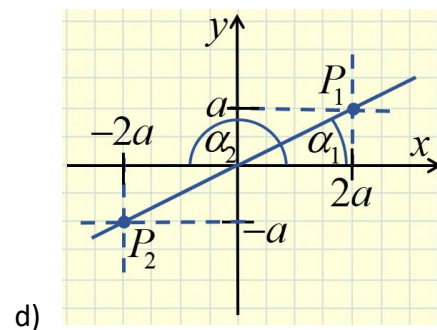
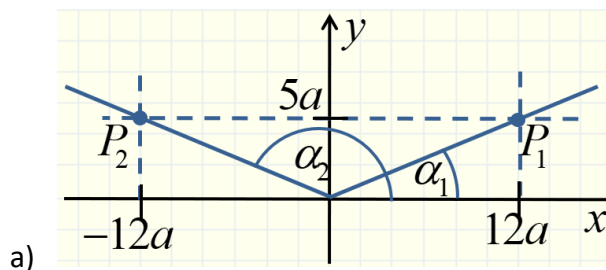
f) $\sin 240^\circ = -\frac{\sqrt{3}}{2}$, $\cos 240^\circ = -\frac{1}{2}$, $\operatorname{tg} 240^\circ = \sqrt{3}$, $\operatorname{ctg} 240^\circ = \frac{\sqrt{3}}{3}$

g) $\sin 300^\circ = -\frac{\sqrt{3}}{2}$, $\cos 300^\circ = \frac{1}{2}$, $\operatorname{tg} 300^\circ = -\sqrt{3}$, $\operatorname{ctg} 300^\circ = -\frac{\sqrt{3}}{3}$

h) $\sin 315^\circ = -\frac{\sqrt{2}}{2}$, $\cos 315^\circ = \frac{\sqrt{2}}{2}$, $\operatorname{tg} 315^\circ = -1$, $\operatorname{ctg} 315^\circ = -1$

i) $\sin 330^\circ = -\frac{1}{2}$, $\cos 330^\circ = \frac{\sqrt{3}}{2}$, $\operatorname{tg} 330^\circ = -\frac{\sqrt{3}}{3}$, $\operatorname{ctg} 330^\circ = -\sqrt{3}$

Zad. 5



KONIEC