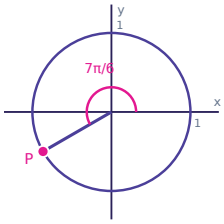
Task card 1 Trig Functions on the Unit Circle

Find the point P where the terminal side of θ = 7π/6 meets the unit circle.

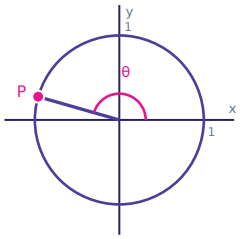


Task card 2 Trig Functions on the Unit Circle

Find the exact value of tan(4π/3).

Task card 3 Trig Functions on the Unit Circle

The terminal side of θ meets the unit circle at P($-\frac{24}{25}, \frac{7}{25}$). Find tan θ.



Task card 4 Trig Functions on the Unit Circle

$P(x, \frac{5}{13})$ is on the unit circle in quadrant II. Find x.

Task card 5 Trig Functions on the Unit Circle

Is tan(100°) positive or negative?

Task card 6 Trig Functions on the Unit Circle

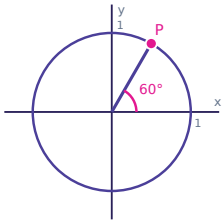
sin θ < 0 and cos θ < 0. In which quadrant does θ lie?

Task card 7 — Trig Functions on the Unit Circle

θ is in quadrant II and its reference angle is 60°. Find the exact value of tan θ.

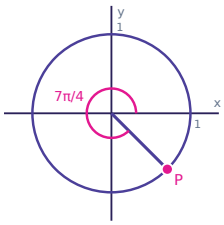
Task card 8 — Trig Functions on the Unit Circle

Find the point P where the terminal side of θ = 60° meets the unit circle.



Task card 9 — Trig Functions on the Unit Circle

Find the point P where the terminal side of θ = 7π/4 meets the unit circle.

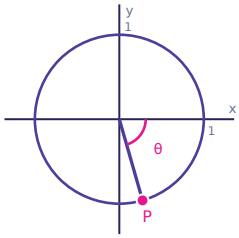


Task card 10 — Trig Functions on the Unit Circle

Find the exact value of $\sin(3\pi/2)$.

Task card 11 — Trig Functions on the Unit Circle

The terminal side of θ meets the unit circle at $P(\frac{7}{25}, -\frac{24}{25})$. Find cos θ.



Task card 12 — Trig Functions on the Unit Circle

$P(x, \frac{8}{17})$ is on the unit circle in quadrant II. Find x.

Task card 13 Trig Functions on the Unit Circle

Is $\tan(7\pi/6)$ positive or negative?

Task card 14 Trig Functions on the Unit Circle

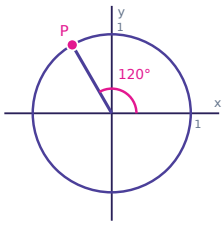
$\sin\theta < 0$ and $\cos\theta > 0$. In which quadrant does θ lie?

Task card 15 Trig Functions on the Unit Circle

θ is in quadrant III and its reference angle is 45°. Find the exact value of $\cos\theta$.

Task card 16 Trig Functions on the Unit Circle

Find the point P where the terminal side of $\theta = 120°$ meets the unit circle.

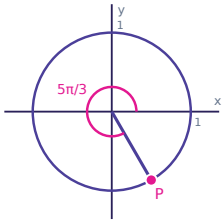


Task card 17 Trig Functions on the Unit Circle

Find the exact value of $\tan(\pi/6)$.

Task card 18 Trig Functions on the Unit Circle

Find the point P where the terminal side of $\theta = 5\pi/3$ meets the unit circle.

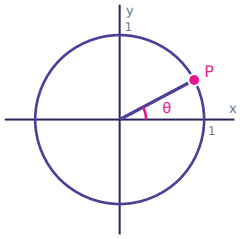


Task card 19 Trig Functions on the Unit Circle

Find the exact value of tan(-150°).

Task card 20 Trig Functions on the Unit Circle

The terminal side of θ meets the unit circle at $P(\frac{15}{17}, \frac{8}{17})$. Find sin θ.



Task card 21 Trig Functions on the Unit Circle

$P(-\frac{5}{13}, y)$ is on the unit circle in quadrant III. Find y.

Task card 22 Trig Functions on the Unit Circle

θ is in quadrant IV and its reference angle is 60°. Find the exact value of cos θ.

Task card 23 Trig Functions on the Unit Circle

cos θ < 0 and tan θ > 0. In which quadrant does θ lie?

Task card 24 Trig Functions on the Unit Circle

Is sin(5π/4) positive or negative?

Trig Functions on the Unit Circle Task Cards

Recording sheet · Grade 11 · Give exact values (like -√3/2) and points as (x, y). Write quadrants as I, II, III or IV, signs as positive or negative, and "undefined" where a value does not exist.

Scan to check your answers

Name: _____ Date: _____

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

Trig Functions on the Unit Circle Task Cards: Answer Key

Grade 11 · Medium

The answers online

1. $\left(-\frac{\sqrt{3}}{2}, -\frac{1}{2}\right)$	**2.** $\sqrt{3}$	**3.** $-\frac{7}{24}$
4. $-\frac{12}{13}$	**5.** negative	**6.** III
7. $-\sqrt{3}$	**8.** $\left(\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$	**9.** $\left(\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}\right)$
10. -1	**11.** $\frac{7}{25}$	**12.** $-\frac{15}{17}$
13. positive	**14.** IV	**15.** $-\frac{\sqrt{2}}{2}$
16. $\left(-\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$	**17.** $\frac{\sqrt{3}}{3}$	**18.** $\left(\frac{1}{2}, -\frac{\sqrt{3}}{2}\right)$
19. $\frac{\sqrt{3}}{3}$	**20.** $\frac{8}{17}$	**21.** $-\frac{12}{13}$
22. $\frac{1}{2}$	**23.** III	**24.** negative