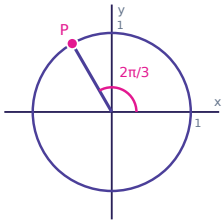
Task card 1 Trig Functions on the Unit Circle

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

Task card 2 Trig Functions on the Unit Circle

Find the point P where the terminal side of $\theta = 2\pi/3$ meets the unit circle.

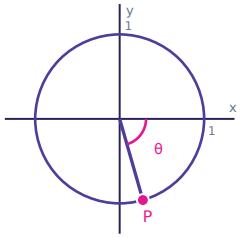


Task card 3 Trig Functions on the Unit Circle

Find the exact value of $\tan(-135°)$.

Task card 4 Trig Functions on the Unit Circle

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



Task card 5 Trig Functions on the Unit Circle

$P\left(\frac{7}{25}, y\right)$ is on the unit circle in quadrant IV. Find y.

Task card 6 Trig Functions on the Unit Circle

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

Task card 7 Trig Functions on the Unit Circle

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

Task card 8 Trig Functions on the Unit Circle

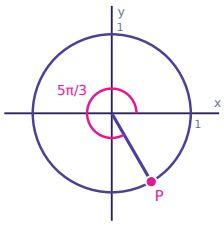
Is $\cos(\pi/4)$ positive or negative?

Task card 9 Trig Functions on the Unit Circle

Find the exact value of $\sin(13\pi/6)$.

Task card 10 Trig Functions on the Unit Circle

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

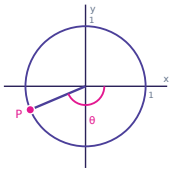


Task card 11 Trig Functions on the Unit Circle

Find the exact value of $\sin(660°)$.

Task card 12 Trig Functions on the Unit Circle

The terminal side of θ meets the unit circle at $P\left(-\frac{12}{13}, -\frac{5}{13}\right)$. Find $\tan\theta$.



Task card 13 Trig Functions on the Unit Circle

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

Task card 14 Trig Functions on the Unit Circle

θ is in quadrant II and its reference angle is 45°. Find the exact value of tan θ.

Task card 15 Trig Functions on the Unit Circle

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

Task card 16 Trig Functions on the Unit Circle

Is tan(100°) positive or negative?

Task card 17 Trig Functions on the Unit Circle

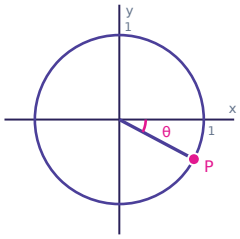
Find the exact value of tan(5π/3).

Task card 18 Trig Functions on the Unit Circle

Find the exact value of cos(-60°).

Task card 19 — Trig Functions on the Unit Circle

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



Task card 20 — Trig Functions on the Unit Circle

$P(x, \frac{12}{13})$ is on the unit circle in quadrant I. Find x.

Task card 21 — Trig Functions on the Unit Circle

θ is in quadrant IV and its reference angle is 30°. Find the exact value of tan θ.

Task card 22 — Trig Functions on the Unit Circle

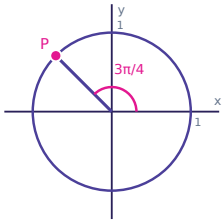
sin θ > 0 and cos θ > 0. In which quadrant does θ lie?

Task card 23 — Trig Functions on the Unit Circle

Is cos(4π/3) positive or negative?

Task card 24 — Trig Functions on the Unit Circle

Find the point P where the terminal side of θ = 3π/4 meets the unit circle.



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 · Hard

The answers online

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