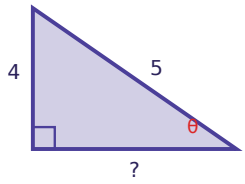
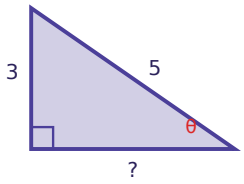
**Task card 1** Double-Angle Formulas

$\sin\theta = \frac{4}{5}$ and θ is acute. Find the exact value of cos 2θ.




**Task card 2** Double-Angle Formulas

$\sin\theta = \frac{3}{5}$ and θ is acute. Find the exact value of cos 2θ.




**Task card 3** Double-Angle Formulas

Find the exact value:

$2\tan(165°) / (1 - \tan^2(165°))$

**Task card 4** Double-Angle Formulas

$\cos\theta = -\frac{12}{13}$ and θ is in quadrant II. Find the exact value of cos 2θ.

**Task card 5** Double-Angle Formulas

$\cos\theta = -\frac{3}{5}$ and θ is in quadrant II. Find the exact value of tan 2θ.

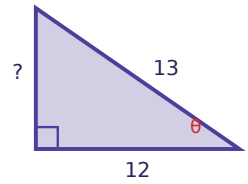
**Task card 6** Double-Angle Formulas

Find the exact value:

$2\cos^2(22.5°) - 1$

**Task card 7** Double-Angle Formulas

$\cos\theta = \frac{12}{13}$ and θ is acute. Find the exact value of cos 2θ.



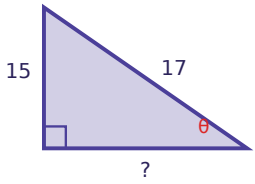

**Task card 8** Double-Angle Formulas

Find the exact value:

$\cos^2(60°) - \sin^2(60°)$

**Task card 9** Double-Angle Formulas

$\sin\theta = \frac{15}{17}$ and θ is acute. Find the exact value of cos 2θ.




**Task card 10** Double-Angle Formulas

$\cos\theta = -\frac{15}{17}$ and θ is in quadrant II. Find the exact value of tan 2θ.

**Task card 11** Double-Angle Formulas

$\sin\theta = \frac{3}{5}$ and θ is in quadrant II. Find the exact value of tan 2θ.

**Task card 12** Double-Angle Formulas

$\cos\theta = -\frac{4}{5}$ and θ is in quadrant II. Find the exact value of sin 2θ.

**Task card 13** Double-Angle Formulas

Find the exact value:

$2\cos^2(165°) - 1$

**Task card 14** Double-Angle Formulas

$\sin\theta = -\frac{5}{13}$ and $\theta$ is in quadrant III. Find the exact value of $\sin 2\theta$.

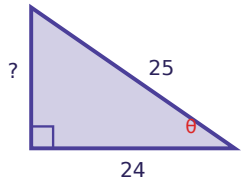
**Task card 15** Double-Angle Formulas

Find the exact value:

$2\tan(105°) / (1 - \tan^2(105°))$

**Task card 16** Double-Angle Formulas

$\cos\theta = \frac{24}{25}$ and $\theta$ is acute. Find the exact value of $\tan 2\theta$.



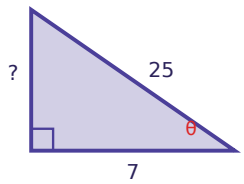

**Task card 17** Double-Angle Formulas

Find the exact value:

$2\sin(120°)\cos(120°)$

**Task card 18** Double-Angle Formulas

$\cos\theta = \frac{7}{25}$ and $\theta$ is acute. Find the exact value of $\cos 2\theta$.



**Task card 19** Double-Angle Formulas

$\sin\theta = -\frac{8}{17}$ and $\theta$ is in quadrant III. Find the exact value of $\cos 2\theta$.

**Task card 20** Double-Angle Formulas

Find the exact value:

$2\sin(60°)\cos(60°)$

**Task card 21** Double-Angle Formulas

$\cos\theta = -\frac{8}{17}$ and $\theta$ is in quadrant II. Find the exact value of $\cos 2\theta$.

**Task card 22** Double-Angle Formulas

Find the exact value:

$2\cos^2(30°) - 1$

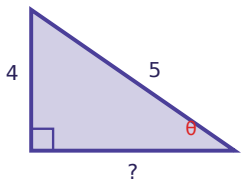
**Task card 23** Double-Angle Formulas

Find the exact value:

$2\sin(30°)\cos(30°)$

**Task card 24** Double-Angle Formulas

$\sin\theta = \frac{4}{5}$ and $\theta$ is acute. Find the exact value of $\tan 2\theta$.



# Double-Angle Formulas Task Cards

Recording sheet · Grade 12 · Give exact answers: fractions in simplest form, or radicals like √3/2.

Name: _____ Date: _____

Scan to check your answers

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

# Double-Angle Formulas Task Cards: Answer Key

Grade 12 · Medium

The answers online

| | | |
|---|---|---|
| **1.** $-\frac{7}{25}$ | **2.** $\frac{7}{25}$ | **3.** $-\frac{\sqrt{3}}{3}$ |
| **4.** $\frac{119}{169}$ | **5.** $\frac{24}{7}$ | **6.** $\frac{\sqrt{2}}{2}$ |
| **7.** $\frac{119}{169}$ | **8.** $-\frac{1}{2}$ | **9.** $-\frac{161}{289}$ |
| **10.** $-\frac{240}{161}$ | **11.** $-\frac{24}{7}$ | **12.** $-\frac{24}{25}$ |
| **13.** $\frac{\sqrt{3}}{2}$ | **14.** $\frac{120}{169}$ | **15.** $\frac{\sqrt{3}}{3}$ |
| **16.** $\frac{336}{527}$ | **17.** $-\frac{\sqrt{3}}{2}$ | **18.** $-\frac{527}{625}$ |
| **19.** $\frac{161}{289}$ | **20.** $\frac{\sqrt{3}}{2}$ | **21.** $-\frac{161}{289}$ |
| **22.** $\frac{1}{2}$ | **23.** $\frac{\sqrt{3}}{2}$ | **24.** $-\frac{24}{7}$ |