

Brett Robbins Academic Consulting

# Mathematics 20-1 Practice Test

## Unit 2: Trigonometry

5 Questions

Original practice questions written to the Alberta curriculum, in the style of past diploma examinations. Work through each question, then check your answers with the key at the end.

**This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, contact Brett for clarification.**

Question 1

The point (6, 8) lies on the terminal arm of an angle  $\theta$  in standard position.

The exact value of  $\sin \theta$  is

- |                  |                  |
|------------------|------------------|
| A) $\frac{3}{5}$ | B) $\frac{4}{5}$ |
| C) $\frac{5}{3}$ | D) $\frac{3}{4}$ |

Question 2

The exact value of  $\sin 30^\circ + \cos 60^\circ$  is

- |                  |                         |
|------------------|-------------------------|
| A) $\frac{1}{2}$ | B) $\frac{\sqrt{3}}{2}$ |
| C) 1             | D) $\sqrt{3}$           |

Question 3

The reference angle for an angle of  $218^\circ$  in standard position is

- |                |                |
|----------------|----------------|
| A) $38^\circ$  | B) $52^\circ$  |
| C) $128^\circ$ | D) $142^\circ$ |

Question 4

In a right triangle, angle  $A$  measures  $40^\circ$  and the hypotenuse is 25 cm long.

The length of the side adjacent to angle  $A$ , to the nearest tenth of a centimetre, is

- |            |            |
|------------|------------|
| A) 16.1 cm | B) 21.0 cm |
| C) 32.6 cm | D) 19.2 cm |

Question 5

An angle  $\theta$  in standard position has  $\sin \theta = \frac{5}{13}$ , and  $\theta$  is in Quadrant II.

If  $\cos \theta = -\frac{a}{b}$  in lowest terms, then the value of  $a + b$  is

# Answer Key

- |      |      |       |
|------|------|-------|
| 1. B | 3. A | 5. 25 |
| 2. C | 4. D |       |

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