

NO CALCULATORS

CLOSED BOOK

CLOSED NOTES

TIME LIMIT: 15 MINUTES

1. Solve: $32 - 2x^2 = 0$

2. Find the exact value of $\sin 60^\circ$.

3. Find the domain of $f(x) = \sqrt{2-x}$. Express answer in the interval notation.

4. Write any one of the Quotient Identities. Make sure to use proper notation.

5. Find the exact value of $\cos 240^\circ$.

6. Find the domain of $f(x) = \frac{1}{2x-x^3}$. Express answer in the interval notation.

7. Given $f(x) = \frac{3}{2-x}$, find $f(x+h)$.

8. Find the exact value of $\cot\left(\frac{11\pi}{3}\right)$.

9. Find the exact slope of the line $\frac{2x}{3} + \frac{5y}{2} = 1$.

10. Factor completely: $16 - 2x^3$

Answers:

1. $x = -4, 4$

2. $\sqrt{3}/2$

3. $(-\infty, 2]$

4. $\sin\theta / \cos\theta = \tan\theta$ or $\cos\theta / \sin\theta = \cot\theta$

5. $-1/2$

6. $(-\infty, -\sqrt{2}) \cup (-\sqrt{2}, 0) \cup (0, \sqrt{2}) \cup (\sqrt{2}, \infty)$

7. $\frac{3}{2-x-h}$

8. $-1/\sqrt{3}$

9. $-4/15$

10. $2(2-x)(4+2x+x^2)$