

1. Solve $\frac{3x + 1}{4x - 2} = 5$.

2. Solve $x^2 + x - 6 = 0$.

3. Solve $x^2 + x - 6 > 0$.

4. Solve $x^2 + 1 = 6x$ by completing the square.

5. Solve $2x^2 + 20x - 3 = 0$ by completing the square.

6. Solve $x^2 - x - 2 < 0$.

7. State the Pythagorean Theorem

8. Label the missing lengths of the sides of the following triangles:

9. Find the following without using your calculator:

(a) $\sin(\pi/4)$

(b) $\cos(\pi/4)$

(c) $\tan(\pi/4)$

(d) $\tan(\pi/3)$

(e) $\sec(\pi/3)$

(f) $\cos(\pi/6)$

(g) $\cot(\pi/6)$

(h) $\csc(\pi/6)$

10. Solve $\sqrt{3}\tan(x) = 1$ if $0 \leq x < 2\pi$.

11. Solve $2\cos(x)\sin(x) + \cos(x) = 0$ if $0 \leq x < 2\pi$.