

Bonus Assignment #2

Problems 1-7 are from Review Topic #5 - Factoring. Please go through the review problems if you are struggling. **NON-CALCULATOR**

1) $-3n^3 - 5n^4 - n^6$

Factor each completely.

2) $b^2 + 13b + 40$

3) $x^2 + 2x - 48$

4) $16k^2 - 25$

5) $2a^2 - 30a + 112$

6) $5k^2 - 14k - 24$

7) $2n^2 - 23n + 45$

Problems 8-17 are from Review Topic #6 - Solving Quadratics using Factoring & Quadratic Formula. Please go through the review problems if you are struggling. **NON-CALCULATOR**

Solve each equation by factoring.

8) $(x + 1)(x - 1) = 0$

9) $n^2 - 5n - 14 = 0$

10) $b^2 - 2b + 5 = 8$

11) $5p^2 + 10p - 8 = -8$

12) $n^2 = 6n + 16$

13) $3m^2 = -4m$

Solve each equation with the quadratic formula.

14) $9m^2 + 9m + 10 = 0$

15) $5n^2 + 12n - 73 = -8$

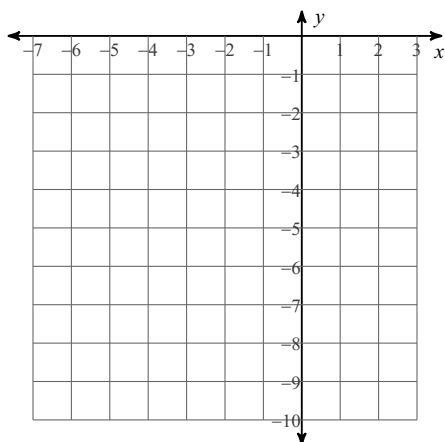
16) $3n^2 - 119 = -4n$

17) $12n^2 - 22 = n$

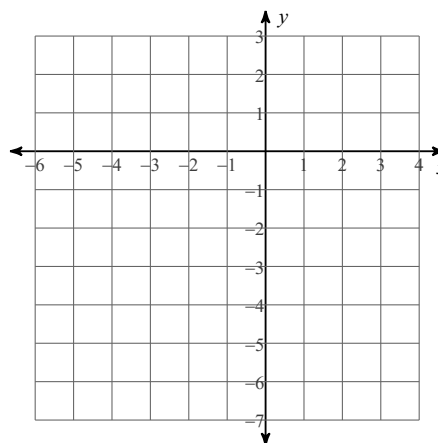
Problems 18-20 are from Review Topic #7 - Graphing Quadratics using a Graphing Calculator. Please go through the review problems if you are struggling. CALCULATOR!!!!!!

Use your calculator to sketch the graph of each function. Label the vertex.

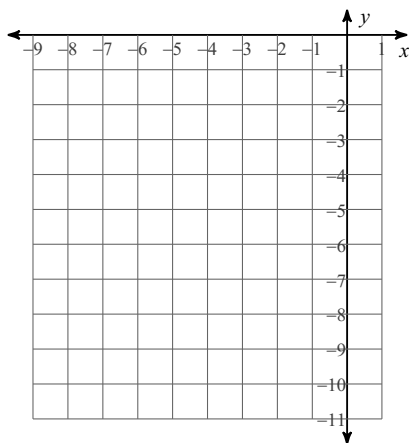
18) $y = -2x^2 + 4x - 3$



19) $y = -2(x + 2)^2 + 2$



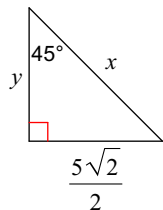
20) $-\frac{1}{2}(y + 2) = (x + 3)^2$



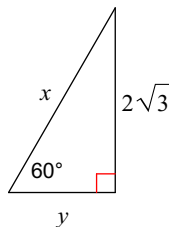
Problems 1-10 are from Review Topic #8 - Right Triangle Trigonometry. Please go through the review problems if you are struggling. CALCULATOR

Special Right Triangles: Find the missing side lengths. Leave your answers as radicals in simplest form.

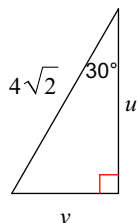
1)



2)

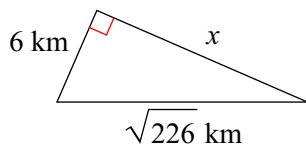


3)

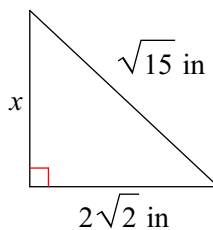


Pythagorean Theorem. Find the missing side of each triangle. Leave your answers in simplest radical form.

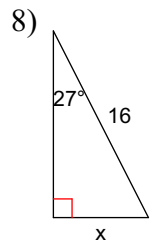
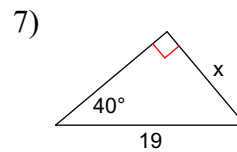
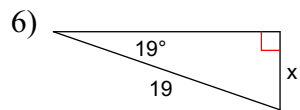
4)



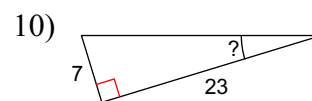
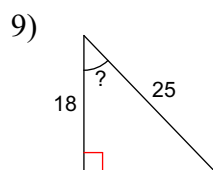
5)



Trigonometry: Find the missing side. Round to the nearest tenth.



Trigonometry: Find the measure of the indicated angle to the nearest degree.



Answers to Bonus Assignment #2 (ID: 1)

1) $-n^3(3 + 5n + n^3)$

5) $2(a - 8)(a - 7)$

9) $\{-2, 7\}$

13) $\left\{-\frac{4}{3}, 0\right\}$

17) $\{1.396, -1.313\}$

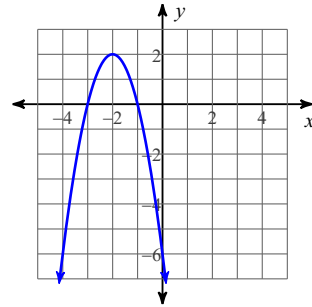
3) $(x - 6)(x + 8)$

7) $(2n - 5)(n - 9)$

11) $\{-2, 0\}$

15) $\left\{2\frac{3}{5}, -5\right\}$

19)



Answers to Right Triangle Trigonometry (ID: 1)

1) $x = 5, y = \frac{5\sqrt{2}}{2}$

5) $\sqrt{7}$ in

9) 44°

3) $u = 2\sqrt{6}, v = 2\sqrt{2}$

7) 12.2