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 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

Simplify each expression.

1. $\left(5m-7m^{4}-3m^{2}\right)-(2m^{2}+7m+m^{4})$

P - $-11m^{4}-5m^{2}-2m$

S - $-8m^{4}-5m^{2}-2m$

N - $-7m^{4}-5m^{2}-2m$

R - $-11m^{4}-5m^{2}+6m$

1. $\left(2n^{4}-1+5n^{3}\right)+(6n^{4}-7+5n^{3})$

T - $8n^{4}+10n^{3}-8$

M - $n^{4}+10n^{3}-16$

O - $n^{4}+10n^{3}-14$

D - $8n^{4}+10n^{3}-16$

Find the product.

1. $\left(a+2\right)\left(7a^{2}+7a-2\right)$

U - $7a^{3}+21a^{2}+12a-4$

O - $8a^{3}-10a^{2}-31a+42$

A - $7a^{3}+29a^{2}+9a+20$

E - $21a^{3}+46a^{2}-21a+2$

1. $(4k+7)(8k^{2}-4k+7)$

T - $24k^{3}+6k^{2}\pm 54k+24$

D - $32k^{3}+40k^{2}+49$

F - $7k^{3}+58k^{2}+17k+8$

H - $20k^{3}+k^{2}-20k+6$

Simplify

1. $\left(-5-7i\right)-\left(-1+i\right)$

M - $-4-6i$

N - $-6+8i$

Y - $-4-8i$

R - $-4+6i$

1. $\left(7+2i\right)\left(-6+i\right)$

F - $-44-5i$

B - $-42+7i$

 I - $40-19i$

O - $-44+6i$

Solve.

1. $n^{2}+8n+16=0$

O - $-4$

C – $3, 4$

W - $-6, 2$

D - $-3, -4$

Solve.

1. $5r^{2}-8r+8=0$

K - $\frac{6\pm 5\sqrt{3}}{3}$

S - $\frac{6\pm i\sqrt{3}}{3}$

B - $8, -\frac{14}{3}$

R - $\frac{4\pm 2i\sqrt{6}}{5}$

Solve.

1. $7x^{2}+5=348$

L - $\pm 71$

Y - $\pm 7$

V - $\pm 69$

S - $\pm \sqrt{71}$

10. What is the vertex of the function graphed below?



O - (-2, -4); minimum

I - (-2, -4); maximum

A - (2, 4); minimum

E - (2, 4); maximum

11. What is the vertex of the function graphed below?



E - (-1, -4); minimum

U - (1, 4); minimum

O - (1, -4); maximum

A - (-1, 4); maximum

Which graph represents the new function?







Find the discriminant of each quadratic equation then state the number and type of solutions.

14. $-4x^{2}+4x-1=0$ 15. $-3x^{2}+6x-3=0$

E - 0; one real solution A - 0; two imaginary solutions

R - 0; two real solutions B - -111; two imaginary solutions

K - 65; two real solutions S - 0; one real solution

D - 32; two real solutions N - 72; two real solutions

Factor over the complex number system.

 16. x2 + 25 17. x2+16

T – (x+5i)(x-5i) ? – (x-4i)2

W – (x-5i)2 ! – (x+4i)(x-4i)

R – (x+5)2 . – (x+4i)2

L – (x-5)(x+5) : - (x-4)(x+4)