

No quiz today, 3.3 HW is due
today.

Questions on Factoring WKS??

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Factoring worksheet

Factor each completely.

- 1) $n^2 - 8n = n(n-8)$
- 2) $a^2 + a - 90$
- 3) $x^2 + 8x$
- 4) $3k^2 + 12k -$
- 5) $n^2 - 10n + 16$
- 6) $a^3 - 10a^2 +$
- 7) $x^2 - 6x - 2$
- 8) $3x^2 - 30x$
- 9) $n^4 - 15n^3 + 56n^2$
- 10) $a^3 + 16a^2 +$

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$a^2 - b^2 = (a + b)(a - b)$

25) $18x^3 - 60x^2 + 50x$

26) $25n^2 + 40n$

27) $5n^2 - 125 = 5(n^2 - 25)$
 $= 5(n - 5)(n + 5)$

28) $16x^2 - 9$

29) $9m^2 - 1$

30) $16n^2 + 40n$

31) $9v^2 - 16$

32) $12m^2 - 36m$

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The screenshot shows a PDF document titled "sm3h factoring worksheet.pdf" in Adobe Acrobat Reader DC. The document contains handwritten mathematical work. At the top left, it defines $a = 3x$ and $b = 5$. Next to it is the identity $a^2 - 2ab + b^2 = (a - b)^2$. Below this, problem 25 is solved: $18x^3 - 60x^2 + 50x = 2x(9x^2 - 30x + 25) = 2x(3x - 5)^2$. To the right of the solution are several other factoring problems: 26) $25n^2 + 40n$, 27) $5n^2 - 125$, 28) $16x^2 - 9$, 29) $9m^2 - 1$, 30) $16n^2 + 40n$, 31) $9v^2 - 16$, and 32) $12m^2 - 36n$. At the bottom of the page, there is a copyright notice: "© 2016 Kuta Software LLC. All rights reserved. Made with".

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$a = 3x$
 $b = 5$

$a^2 - 2ab + b^2 = (a - b)^2$

25) $18x^3 - 60x^2 + 50x = 2x(9x^2 - 30x + 25)$
 $= 2x(3x - 5)^2$

26) $25n^2 + 40n$

27) $5n^2 - 125$

28) $16x^2 - 9$

29) $9m^2 - 1$

30) $16n^2 + 40n$

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32) $12m^2 - 36n$

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a.c

~~$\begin{matrix} -56 & 5 \\ 7x & 7x \end{matrix}$~~

-280

-51

$20) 7x^2 - 51x - 40 =$

$(7x+5)(x-8)$

$22) 42k^2 - 54k + 12$

$2 \cdot 140$

$2 \cdot 2 \cdot 70$

$2 \cdot 2 \cdot 7 \cdot 2 \cdot 5$

$56 \cdot 5$

$24) 3a^2 + 7a$

$26) 25n^2 + 40n + 16$

$28) 16x^2 - 9$

$30) 16n^2 + 40n + 25$

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$$14) 3b^4 + 14b^3 + 8b^2 = b^2(3b^2 + 14b + 8) =$$

$$\frac{4}{b} = \frac{12}{3b} \times \frac{2}{3b} \rightarrow (3b+2)(b+4)$$

$$16) 7x^3 + 9x^2 + 72x$$

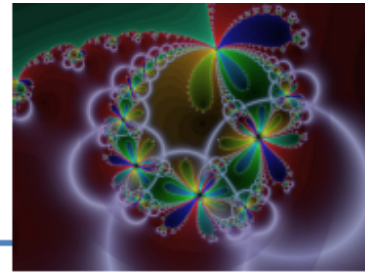
$$18) 2v^3 + v^2 - 10v$$

$$20) 7x^2 - 51x - 40$$

$$22) 42k^2 - 54k + 12$$

$$24) 3a^2 + 7a$$

8.50 x 11.00 in

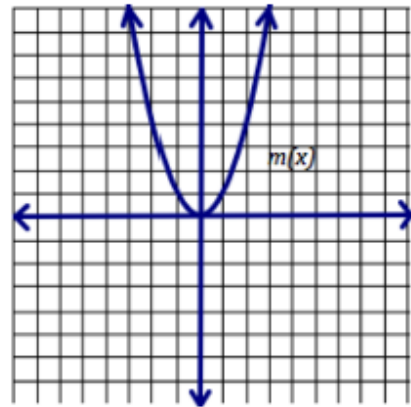
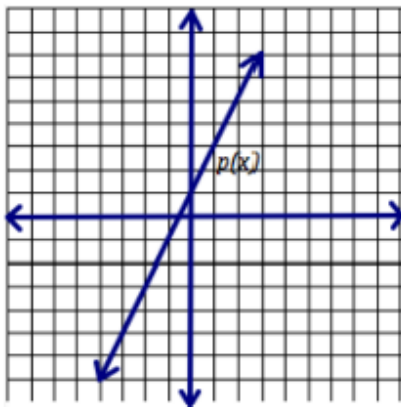
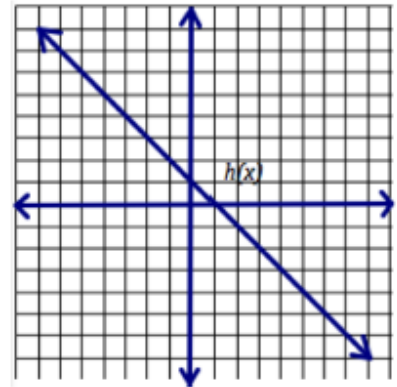
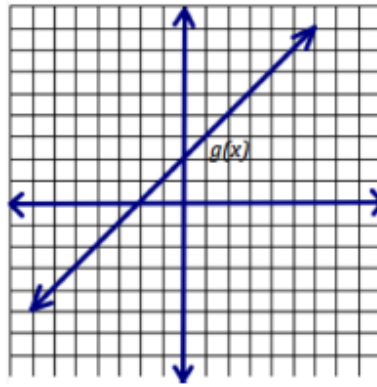
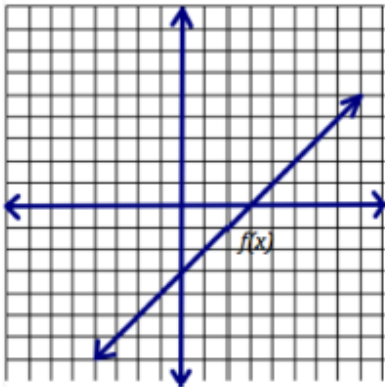


3.4 Polynomial Connections

A Solidify Understanding Task

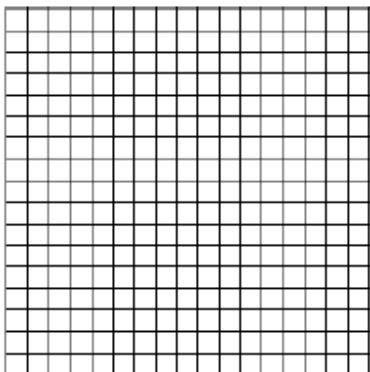
This task is about using what we know to make conjectures about features of polynomial functions.

Below are graphs of polynomial functions: $f(x)$, $g(x)$, $h(x)$, $p(x)$, $m(x)$

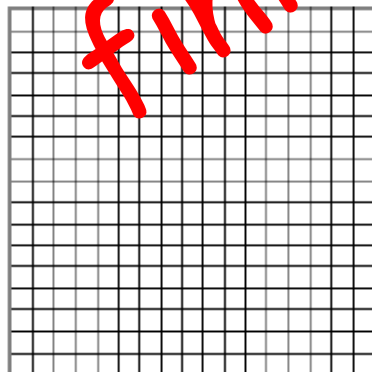


Part 1: Use the graphs above to complete problems 1-9. For each question, lightly sketch the graph of each function, and then on the same set of axes graph the solution.

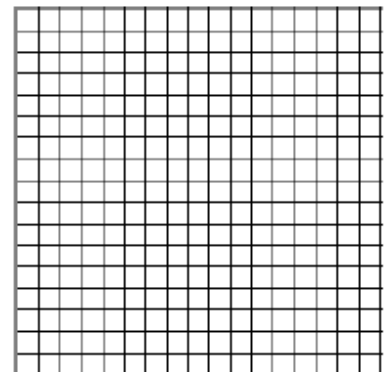
1. $f(x) + g(x)$



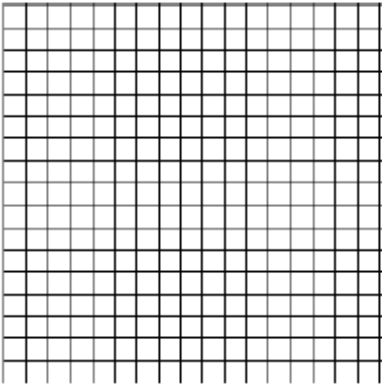
2. $f(x) + p(x)$



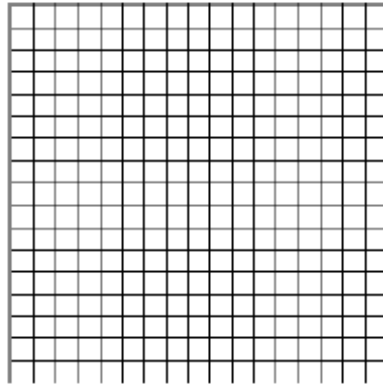
3. $f(x) + m(x)$



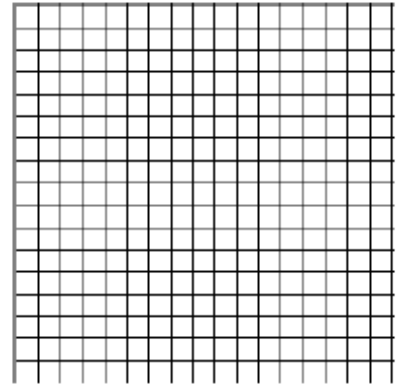
4. $f(x) - h(x)$



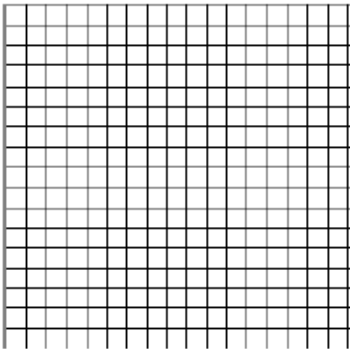
5. $g(x) * f(x)$



6. $f(x) * h(x)$

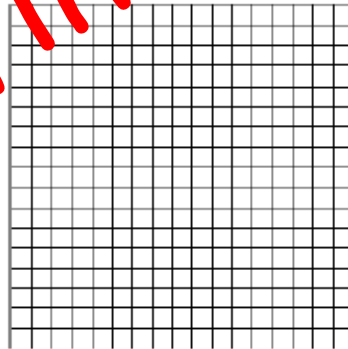


7. $g(x) * h(x)$

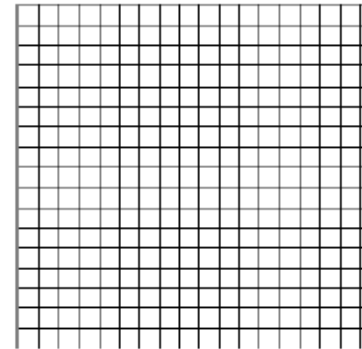


finish

8. $f(x) * g(x) * p(x)$



9. $f(x) * g(x) * h(x)$



10. Based on your experience, describe the results when you add, subtract, or multiply linear functions. (Make as many conjectures about the results of adding, subtracting, and multiplying linear factor equations and the resulting polynomials as possible.)

Homework

3.4 "Ready, Set, Go"