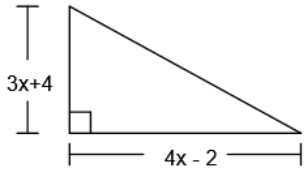
# EXAM REVIEW 2

*CHAPTER 2: The Algebra of Quadratic Expressions*

1. Write a simplified expression to represent the area of the triangle.




2. Factor fully.

(a) $-2x^2+8x-10$ (b) $x^2-4x-32$ (c) $63m^2-7n^2$
(d) $16a^2-24ab+9b^2$ (e) $21x^2-13xy+2y^2$ (f) $-2x^2+7x+15$

3. Identify the following as a monomial, binomial, or trinomial.
(a) $x^2-2x$ (b) $(x-2)(x+1)$ (c) $3x^2-x-2$ (d) $x^2(x+1)-2x(x+1)+7$

4. Factor each using the product of prime numbers.
(a) 304 (b) 9200

5. What are ALL possible integer values, $k$, such that $x^2+kx-32$ can be factored?

6. Factor fully.

(a) $3(b^2-4)+a^2(b^2-4)$ (b) $18(2-x)+x^2(x-2)+3x(x-2)$

7. Expand and simplify.

(a) $3(x^2-2)-4x(3x-7)$ (b) $-(a-3)^2+3(5a+2)^2$

8. Name an integer, $k$, such that the quadratic $6x^2-22x+k$ can be factored.

9. Find the GCF for each of the following polynomials.

(a) $12a^3b^3-6a^4b^2+9a^5b^4$ (b) $5x^2(x+y)-20y^2(-x-y)$

***EXTRA QUESTIONS – Chapter 2*** ***p. 122 # 1b, 5, 6, 8, 9.***
***p. 186 # 9 – 11.***

5. What are ALL possible integer values, $k$, such that $x^2+kx-32$ can be factored?

factors of 32

1 32

2 16

3

4 8

5

6

7

8

for -32 either the left or the right column is negative

1 -32 = -31 or -1 32 = 31

2 -16 = -14 -2 16 = 14

4 -8 = -4 -4 8 = 4

$x^2+kx-32$

if $k=-31$

$x^2-31x-32$

$=(x-32)(x+1)$

8. Name an integer, $k$, such that the quadratic $6x^2-22x+k$ can be factored.

if $k=4$

P: 24 S: -22

1 24

2 12

$k=5$

P: 30 S: -22

1 30 31 -29

2 15 17 -17

3 10 13 13

7

$k=1$ M: 6 A: 22

1 6

$k=2$ M: 12 A: 20

1 13

$k=3$ M: 18 A: -22 ?

1 18

$k=4$