

Review for Test

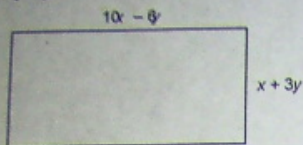
Name _____

Factoring Polynomials

● $3a^{10} + 16a^8b - 12a^7b + 28a^7$
 $20a^{10}$

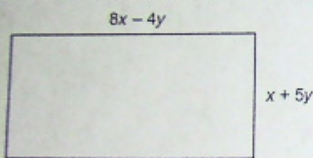
- | | |
|--|--|
| i) $3k^2 + 16k + 5$ | 2) $3p^2 - 10p - 25$ |
| ii) $16n^4 - 49n^2$ | 4) $5p^2 + 23p - 10$ |
| iii) $100b^8 - 49$ | 6) $5n^2 + 6n - 8$ |
| iv) $-8x^4 + 72x + 48$ | 8) $-30p^6 - 50p^8 + 10p^9$ |
| v) $3k^2 - 2k - 1$ | 10) $u^2 - 5uv + 6v^2$ |
| vi) $3x^{10}y - 15x^9y^2 + 15x^3y^3 - 9x^3y$ | 12) $-25a^2b^9c^2 + 20a^4b^5 - 10a^3b^4$ |
| | 14) $k^6 - 36h^2$ |

15 Which polynomial, written in simplified form, represents the area of this rectangle?



- a. $10x^2 - 24xy - 18y^2$
- b. $10x^2 + 18xy - 18y^2$
- c. $20x^2 + 48xy - 36y^2$
- d. $10x^2 + 24xy - 18y^2$

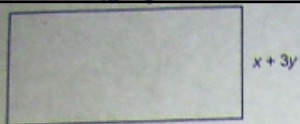
16 Which polynomial, written in simplified form, represents the area of this rectangle?



- a. $8x^2 - 36xy - 20y^2$
- b. $8x^2 + 22xy - 20y^2$
- c. $16x^2 + 72xy - 40y^2$
- d. $8x^2 + 36xy - 20y^2$

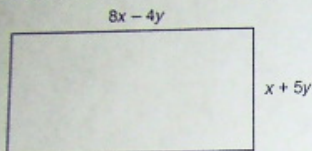
17 Which of the following trinomials can be represented by a rectangle?

- a. $y^2 + 3y + 12$
- b. $y^2 + 12y + 5$
- c. $y^2 + 8y + 15$
- d. $y^2 + 14y + 3$



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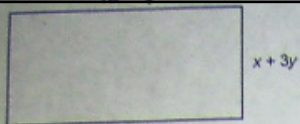
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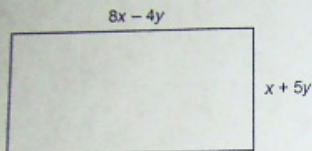
18 Which of the following trinomials can be represented by a rectangle?

- a. $2a^2 + 29a + 12$
- b. $2a^2 + 19a + 9$
- c. $2a^2 + 14a + 63$
- d. $2a^2 + 9a + 2$



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Answer Key

1. $20a^{10} + 16a^8b - 12a^7b + 28a^7$
 CF. $4a^7(5a^3 + 4ab - 3b + 7)$

2. $3p^2 - 10p - 25$

T $\frac{(3p+5)}{3} \frac{(3p-15)}{3}$

$(3p+5)(p-5)$

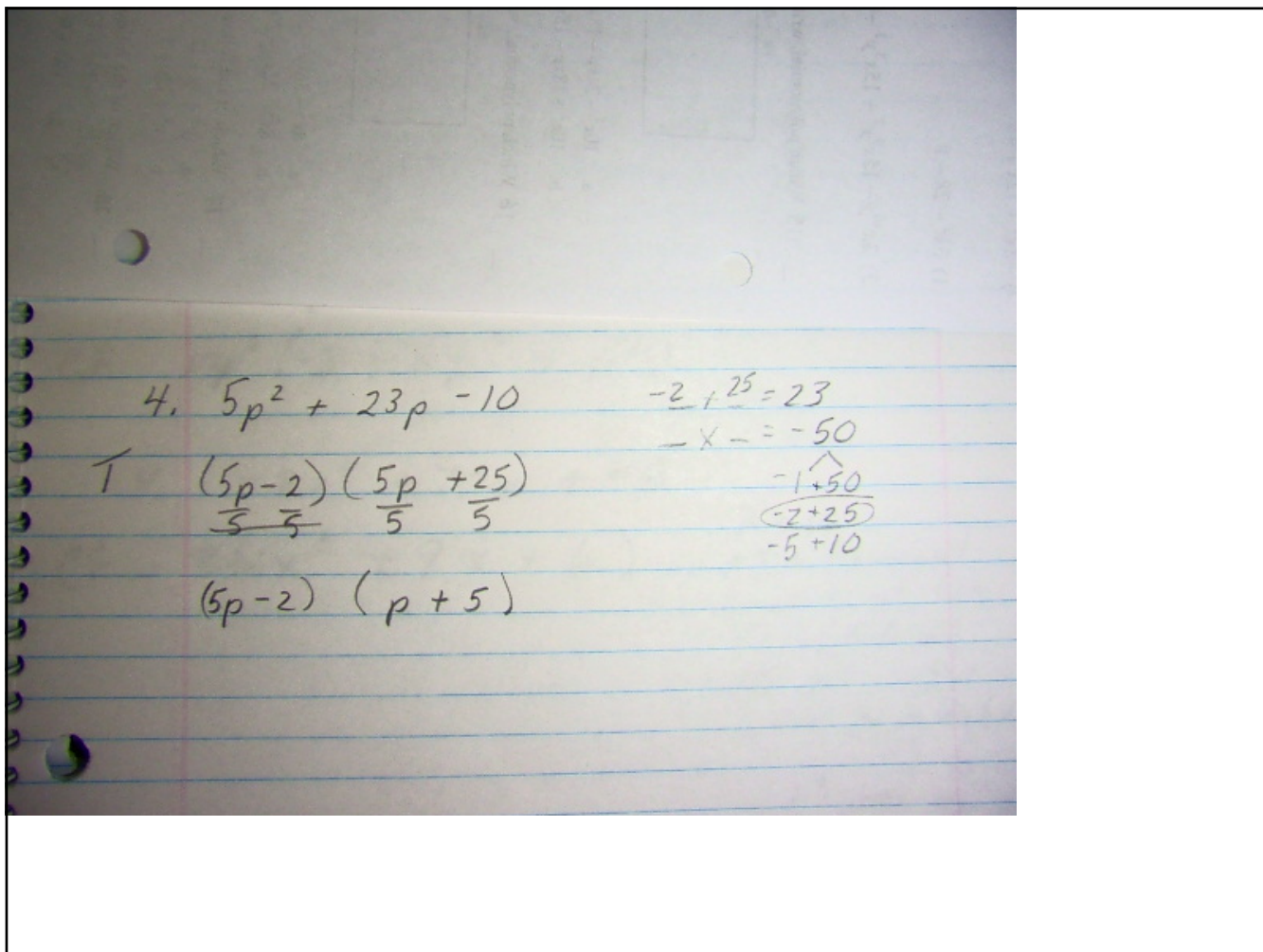
$\frac{5}{-} + \frac{-15}{-} = -10$
 $-x- = -75$
 \wedge
 $1-72$
 $3-24$
 $5-15$

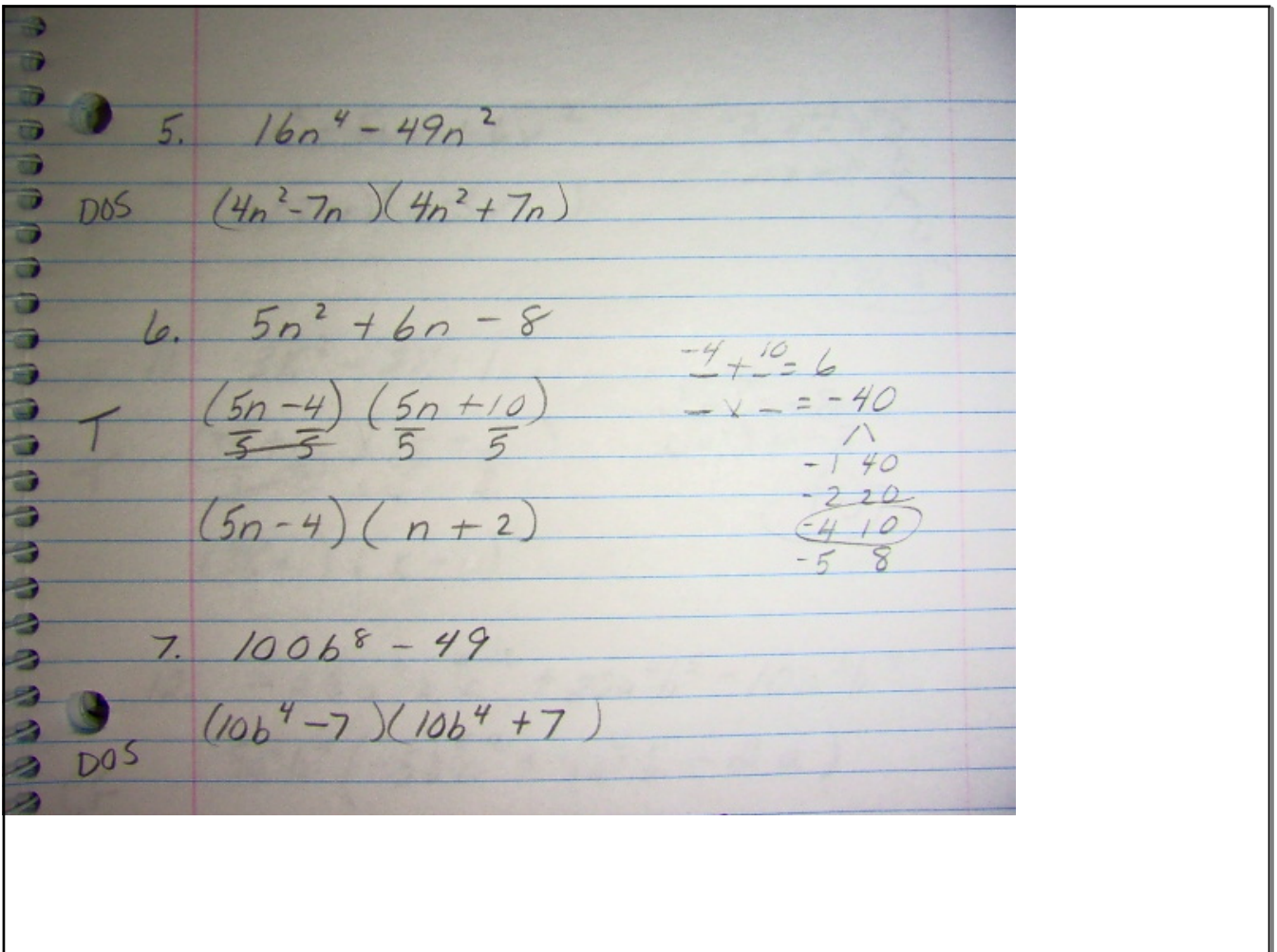
3. $3K^2 + 16K + 5$

T $\frac{(3K+1)}{3} \frac{(3K+15)}{3}$

$(3K+1)(K+5)$

$\frac{1}{-} + \frac{15}{-} = 16$
 $-x- = 15$
 \wedge
 15
 35





$$8. -30p^6 - 50p^8 + 10p^9$$

$$CF \quad 10p^6(-3 - 5p^2 + p^3)$$

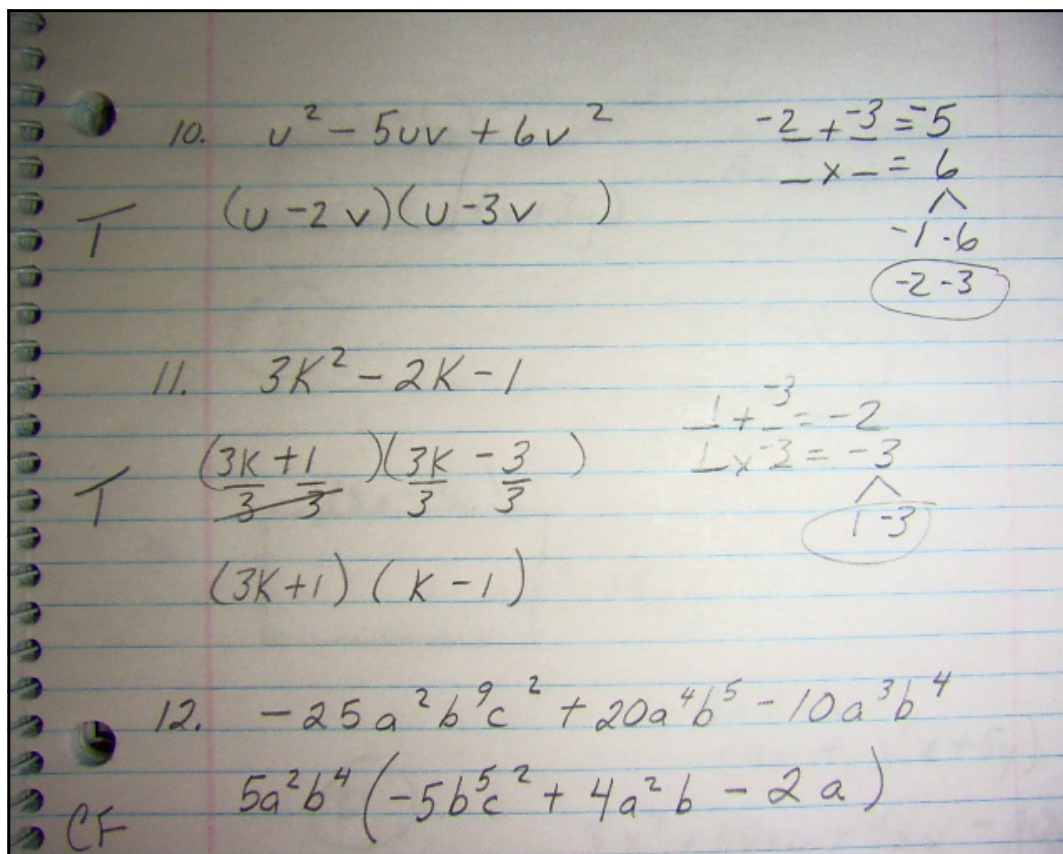
$$9. -8x^4 + 72x + 48$$

$$CF \quad 8(-x^4 + 9x + 6)$$

This is
not a trinomial
because of the
exponents of
the x's, it
would have to be

x^4 and x^2

Hilroy



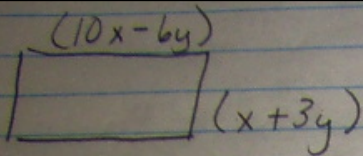
$$13. \quad 3x^{10}y - 15x^9y^2 + 15x^3y^3 - 9x^3y$$

$$\text{CF } 3x^3y(x^7 - 5x^6y + 5y^2 - 3)$$

$$14. \quad K^6 - 36h^2$$

$$\text{DOS } (K^3 - 6h)(K^3 + 6h)$$

15.



$$A = L \times W$$

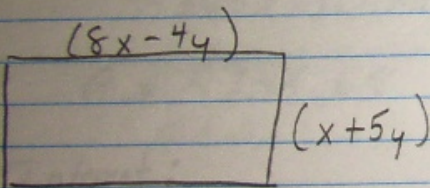
$$= (10x - 6y)(x + 3y)$$

$$10x^2 + 30xy - 6xy - 18y^2$$

$$10x^2 + 24xy - 18y^2$$

(D)

16.



$$A = L \times W$$

$$(8x - 4y)(x + 5y)$$

$$8x^2 + 40xy - 4xy - 20y^2$$

$$8x^2 + 36xy - 20y^2$$

(D)

17. a) $y^2 + 3y + 12$
 None $\begin{matrix} + - = 3 \\ - x - = 12 \\ \wedge \\ 1 \quad 2 \\ 2 \quad 4 \\ 3 \quad 4 \end{matrix}$

b) $y^2 + 12y + 5$
 NONE $\begin{matrix} + - = 12 \\ - x - = 5 \\ \wedge \\ 1 \quad 5 \end{matrix}$

c) $y^2 + 8y + 15$
 $\begin{matrix} + - = 8 \\ - x - = 15 \\ \wedge \\ 3 \quad 5 \end{matrix}$

d) $y^2 + 14y + 3$
 NONE $\begin{matrix} + - = 14 \\ - x - = 3 \\ \wedge \\ 1 \quad 3 \end{matrix}$

Hilroy

18.

a) $2a^2 + 29a + 12$

None!

$$\begin{array}{r} - + = 29 \\ - \times = 24 \\ \begin{array}{r} 1 \ 24 \\ 2 \ 12 \\ 3 \ 8 \\ 4 \ 6 \end{array} \end{array}$$

c) $2a^2 + 14a + 63$

None!

$$\begin{array}{r} - + = 14 \\ - \times = 126 \\ \begin{array}{r} 1 \ 126 \\ 2 \ 63 \\ 3 \ 42 \\ 6 \ 21 \\ 7 \ 18 \end{array} \end{array}$$

b) $2a^2 + 19a + 9$

✓

$$\begin{array}{r} + + = 19 \\ \times = 18 \\ \begin{array}{r} 1 \ 18 \\ 2 \ 9 \\ 3 \ 6 \end{array} \end{array}$$

$(2a+1) \left(\frac{2a+18}{2} \right)$

$(2a+1) (a+9)$

d) $2a^2 + 9a + 2$

None!

$$\begin{array}{r} - + = 9 \\ - \times = 4 \\ \begin{array}{r} 1 \ 4 \\ 2 \ 2 \end{array} \end{array}$$