NAME Key DATE _____ PERIOD _____

Chapter 8 Mid-Chapter Practice Test

SCORE _____

(Lessons 8-1 through 8-5)

Part I ***Write the letter for the correct answer in the blank at the right of each question.***

1. Find $(x^4 - 2x + 3) - (x - 1)$.

$x^4 - 2x + 3 - x + 1$

1. $x^4 - 3x + 4$

2. Simplify $2a(a^3 - 3a + 4) - 4a(3a^3 - 2a^2)$.

$2a^4 - 6a^2 + 8a - 12a^4 + 8a^3$

2. $-10a^4 + 8a^3 - 6a^2 + 8a$

3. Find $(3a + 2b)^2$.

(3)

	$3a$	$+2b$
$3a$	$9a^2$	$6ab$
$2b$	$6ab$	$4b^2$

3. $9a^2 + 12ab + 4b^2$

4. Find $(3x + 8)(2x - 5)$.

(4)

	$3x$	8
$2x$	$6x^2$	$16x$
-5	$-15x$	-40

4. $6x^2 + x - 40$

5. Factor $15g^3h^2 - 35g^2h + 40g$.

$5g(3g^2 - 7gh + 8)$

5. $5g(3g^2 - 7gh + 8)$

6. Solve $2x^2 - 5x = 0$.

$x(2x - 5) = 0$

$x = 0 \quad 2x - 5 = 0$

$2x = 5$

$x = 5/2$

6. $x = 0, 5/2$

7. Factor $75b^3c^3 + 60bc^3 - 35b^4c^4$ completely.

$5bc^3(15b^2 + 12 - 7b^3c)$

7. $5bc^3(15b^2 + 12 - 7b^3c)$

Part II

8. Factor the monomial $-40a^2b^3c$ completely.

$125 = 5 \times 2 \quad 25 = 5 \times 2$

8. $-1 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 5 \cdot a \cdot a \cdot b \cdot b \cdot b \cdot c$

9. FALL Diego drops his camera as he climbs a hill and it falls to the ground 125 feet below. The distance d that the camera falls in t seconds is given by the equation $d = 5t^2$. How long does it take the camera to hit the ground?

9. 5 seconds

Factor each polynomial.

10. $36xy^3 - 42x^2y^2$ $\quad 6xy^2(6y - 7x)$

10. $6xy^2(6y - 7x)$

11. $3xy - 9x + 2y - 6$

$3x(y - 3) + 2(y - 3)$

11. $(3x + 2)(y - 3)$

Simplify each expression.

12. $(4g^3 - 5g^2 - 2) - (3g^2 + 3g - 6)$

$4g^3 - 5g^2 - 2 - 3g^2 - 3g + 6$

12. $4g^3 - 8g^2 - 3g + 4$

13. $(2y - 3)(3y + 5)$

	$2y$	-3
$3y$	$6y^2$	$-9y$
5	$10y$	-15

13. $6y^2 + y - 15$

14. $(3m - 2n)^2$

$(3m - 2n)(3m - 2n) \quad 9m^2 - 12mn + 4n^2$

14. $9m^2 - 12mn + 4n^2$

15. ~~[illegible]~~