

MATH 103
FALL 2014
EXAM 2

NAME:

1. 10 pts. each Add or subtract as indicated.

(a) $(3r + 8) - (2r - 5)$.

(b) $(2x^5 - 2x^4 + x^3 - 1) + (x^4 - 3x^3 + 2)$

2. 10 pts. each Find each product.

(a) $2x^5y^3(-3x^3y)$

(b) $(z - w)(3z + 4w)$

(c) $(2n + 3)(3n^2 - 4n - 1)$

3. 10 pts. each Divide.

(a) $\frac{p^3 + 3p^2 - 4}{p + 2}$

(b) $\frac{9k^4 + 12k^3 - 4k - 1}{3k^2 - 1}$

4. 10 pts. Factor out the greatest common factor for $16z^2n^6 + 64zn^7 - 32z^3n^3$.

5. 10 pts. Factor by grouping: $10m + 2q + 5mk + qk$.

6. 10 pts. each Factor completely.

(a) $z^2 + 2z - 24$

(b) $8r^2 + 34r + 35$

(c) $14c^2 - 17cd - 6d^2$

(d) $18a^2 - 98b^2$

(e) $343h^3 + 125u^3$

(f) $16m^2 - 8m + 1 - n^2$

7. 10 pts. each Solve each equation.

(a) $x^2 + 80 = 18x$

(b) $-3y^2 + 27y = 0$

(c) $2t^2 + 5t - 2t - 5 = 0$