

Factoring WS - Day 1

Factor each completely.

1) $3n^3 + 32n^2 + 64n$

$$n(3n + 8)(n + 8)$$

2) $35n^3 + 330n^2 + 135n$

$$5n(7n + 3)(n + 9)$$

3) $14n^3 + 148n^2 + 80n$

$$2n(7n + 4)(n + 10)$$

4) $2a^3 + 3a^2 - 35a$

$$a(2a - 7)(a + 5)$$

5) $2x^2 - 21x + 54$

$$(2x - 9)(x - 6)$$

6) $3a^2 + 7a - 6$

$$(3a - 2)(a + 3)$$

7) $48x^2 + 300x + 378$

$$6(2x + 9)(4x + 7)$$

8) $8n^3 + 42n^2 + 49n$

$$n(4n + 7)(2n + 7)$$

$$9) 20k^2 - 4k$$
$$4k(5k - 1)$$

$$10) 18r^2 - 12r$$
$$6r(3r - 2)$$

$$11) 6x^2 - 17x + 5$$
$$(2x - 5)(3x - 1)$$

$$12) 9a^2 - 4a - 5$$
$$(a - 1)(9a + 5)$$

$$13) x^4 - 3x^3 - 54x^2$$
$$x^2(x - 9)(x + 6)$$

$$14) 2v^3 + 24v^2 + 64v$$
$$2v(v + 8)(v + 4)$$

$$15) n^2 - 3n - 18$$
$$(n + 3)(n - 6)$$

$$16) 3x^2 + 6x$$
$$3x(x + 2)$$

$$17) x^2 - 6x - 40$$
$$(x - 10)(x + 4)$$

$$18) 4x^3 - 28x^2$$
$$4x^2(x - 7)$$