W2 – Common Factoring Unit 3

MPM2D

Jensen

1) Factor each of the following expressions if possible.

a) $15w + 25z$

b) $17ca - 8cd$

c) $12b^4 + 18b^2$

d) $7h + 3m - 5k$

2) Factor each of the following expressions if possible.

a) $14x^2y + 16xy^3$

b) $8s^2y + 11t^3$

c) $7gh + 2mn - 13pq$

d) $27r^2s^2 - 18r^3s^2 - 36rs^3$

3) Factor each of the following expressions if possible.

a) $3x(x + 8) + 5(x + 8)$

b) $a(b + 1) + 9c(b + 1)$

c) $2y(x - 5) + 4(x + 5)$

4) Factor each of the following expressions if possible.

a) $mx + my + 2x + 2y$ **b)** $x^2 + 3x + 2x + 6$ **c)** $ay^2 + 3ay + 4y + 12$

5) The formula for the surface area of a cylinder is $SA = 2\pi r^2 + 2\pi rh$

a) Write the formula in factored form

b) If $r = 3$ and $h = 8$, find the surface area using both the original and factored form equations.

6) Factor, if possible.

a) $9a^3 + 27b^2$ **b)** $24xy^2 - 12xy + 36x^2y$ **c)** $xy + 12 + 4x + 3y$

Answers

1)a) $5(3w + 5z)$ **b)** $c(17a - 8d)$ **c)** $6b^2(2b^2 + 3)$ **d)** not factorable
2)a) $2xy(7x + 8y^2)$ **b)** not factorable **c)** not factorable **d)** $9rs^2(3r - 2r^2 - 4s)$
3)a) $(x + 8)(3x + 5)$ **b)** $(b + 1)(a + 9c)$ **c)** not factorable
4)a) $(x + y)(m + 2)$ **b)** $(x + 3)(x + 2)$ **c)** $(y + 3)(ay + 4)$
5)a) $SA = 2\pi r(r + h)$ **b)** $SA = 66\pi$ cm^2, or 207.3 cm^2
6)a) $9(a^3 + 3b^2)$ **b)** $12xy(2y - 1 + 3x)$ **c)** $(x + 3)(y + 4)$