

Name: _____

Date: _____ Score: _____

Worksheet : Simplifying Algebraic Expression

Evaluate the given expressions.

① $p^2q + 3pq + p^2q^2$ for $x = 3, y = 2$ ② $3xy + 4y^2 + 2x$ for $x = 0.2, y = 0.7$

③ $\frac{3y^3 + 4}{5y}$ for $y = 3$

④ $(x + 2y)^2 + (2x - y)^2 + xy$ for $x = 3, y = 4$

⑤ $0.2x^2 + 0.3xy + 0.5y^2$
for $x = 1, y = 3$

⑥ $p^2q^2r(pq^2 + p^2 + q^2) + r^2q$
for $p = 3, q = 2, r = 4$

⑦ $(12y)^2 + (2y)^3 + 2$ for $y = 3$

⑧ $(a^2 - b^2 - c)(a^2 + b^2 + c)$ for $a = 4, b = 6, c = 1$

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Answers

Ⓐ $p^2q + 3pq + p^2q^2$ for $x = 3, y = 2$ Ⓑ $3xy + 4y^2 + 2x$ for $x = 0.2, y = 0.7$

66

Ⓒ $\frac{3y^3 + 4}{5y}$ for $y = 3$

2.78

Ⓓ $(x + 2y)^2 + (2x - y)^2 + xy$ for $x = 3, y = 4$

$\frac{19}{3}$

Ⓔ $0.2x^2 + 0.3xy + 0.5y^2$
for $x = 1, y = 3$

608

Ⓕ $p^2q^2r(pq^2 + p^2 + q^2) + r^2q$
for $p = 3, q = 2, r = 4$

2.6

Ⓖ $(12y)^2 + (2y)^3 + 2$ for $y = 3$

3632

Ⓗ $(a^2 - b^2 - c)(a^2 + b^2 + c)$ for $a = 4, b = 6, c = 1$

1514

-1133