

Worksheet

10/21/2019

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Problem quickname: 3291

1)

Simplify the expression by eliminating the brackets and combining like terms.

Quick:
3291

$$\begin{aligned} \text{a) } & -2a^2 + c^3 - 8c - 8b^2 + 4a^2 - 5c + 6b + 5a \\ & = 2a^2 + 5a - 8b^2 + 6b + c^3 - 13c \end{aligned}$$

$$\text{b) } -2b - 6b^2 + 5a - 6a^2 + 5c^3 + 4a^2 + 9c = 5a - 2a^2 - 6b^2 - 2b + 5c^3 + 9c$$

$$\text{c) } (2a^2 + c + b^2)(7b^2 - 9b^2) = -4a^2b^2 - 2b^4 - 2b^2c$$

$$\text{d) } -2b^2 + 6b^2 + b + 6c - 8b^2 = b - 4b^2 + 6c$$

$$\text{e) } 2a^2 - 4c + 5c + 6b^2 + a^2 - 7a^2 = 6b^2 - 4a^2 + c$$

2)

Simplify the expression by eliminating the brackets and combining like terms.

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$$\begin{aligned} \text{a) } & (6a^2 + 4b^2 + 6c^3 - 8a^2 - 3c + 7c - (8a^2 - 8c^3))((-3)a^2 + 8a) = \\ & 30a^4 - 80a^3 - 12a^2b^2 - 42a^2c^3 - 12a^2c + 32ab^2 + 112ac^3 + 32ac \end{aligned}$$

$$\text{b) } 2b + 3a^2 + c + 8b - 4a^2 + 8a - ((-2)b^2 + 2c + a^2 - 2c) + 4a^2 - 5c^3 + 5a^2 = 7a^2 + 8a + 2b^2 + 10b - 5c^3 + c$$

$$\begin{aligned} \text{c) } & (-9b - 3c^3 - 7c + 6b + 4b^2 + c - 5c + 5b^2 - 9c + 4a^2)((-7)a + 5c + 8a) = \\ & 4a^3 + 20a^2c + 9ab^2 - 3ab - 3ac^3 - 20ac + 45b^2c - 15bc - 15c^4 - 100c^2 \end{aligned}$$

$$\begin{aligned} \text{d) } & (-3c^3 + 8b)((-4)a + 2c^3 + 8b^2 - 4a^2)(7b^2 + 7b^2 + 4a)((-8)a^2 - 3a^2 + a - 7a^2) = \\ & 2304a^5b - 864a^5c^3 - 864a^4c^3 + 2304a^4b - 3024a^4b^2c^3 + 8064a^4b^3 + 48a^4c^3 - \\ & 128a^4b + 432a^3c^6 - 1152a^3bc^3 + 1728a^3b^2c^3 - 4608a^3b^3 - 3024a^3b^2c^3 + \\ & 8064a^3b^3 + 48a^3c^3 - 128a^3b + 168a^3b^2c^3 - 448a^3b^3 - 448a^2b^3 + 168a^2b^2c^3 + \\ & 256a^2b^3 - 96a^2b^2c^3 + 64a^2bc^3 - 24a^2c^6 - 16128a^2b^5 + 6048a^2b^4c^3 - \\ & 4032a^2b^3c^3 + 1512a^2b^2c^6 + 896ab^5 - 336ab^4c^3 + 224ab^3c^3 - 84ab^2c^6 \end{aligned}$$

$$\begin{aligned} \text{e) } & -6c - 5c + 8a^2 - ((-5)c^3 - 7c^3 + 10a) - 5a^2 - 3c - 3c^3 + 6c + 3b - 2a^2 - 8b^2 = \\ & a^2 - 10a - 8b^2 + 3b + 9c^3 - 8c \end{aligned}$$

3)

Simplify the expression by eliminating the brackets and combining like terms.

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$$\text{a) } 3e^2 + 2e^2 - 8b^3 - (9e + 10e) = 5e^2 - 8b^3 - 19e$$

$$\text{b) } c^3 - 4c - 9b + a^2 + 6b + 6c^3 = a^2 - 3b + 7c^3 - 4c$$

$$c) -8a + 9b + 6d^2 + 5b + d^2 + 8e^2 = 14b - 8a + 7d^2 + 8e^2$$

$$d) b^3 - 9c^3 + 2c - 10b - 2d + 4e + 6b^3 = 7b^3 - 10b - 9c^3 + 2c - 2d + 4e$$

$$e) -8a^2 - 2a^2 - 9b + b + d = d - 10a^2 - 8b$$

4)

Simplify the expression by eliminating the brackets and combining like terms.

Quick:
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$$a) -3a + 6c - 7a^3 - 9c + 10b^2 + 8b^2 + c = 18b^2 - 7a^3 - 3a - 2c$$

$$b) -4c + 2a + 4a^3 - 8a^3 + 8b^2 + a^3 = 2a - 3a^3 + 8b^2 - 4c$$

$$c) (-6c - 8b)(2c - 8a^3) = 64a^3b + 48a^3c - 16bc - 12c^2$$

$$d) -9c^4 - 10c^4 + 5b^2 - 7b + 6c + 2b - 9c = 5b^2 - 5b - 19c^4 - 3c$$

$$e) (-9b + 8c + a^3)(6b + 3c - 10c^4) \\ = 6a^3b - 10a^3c^4 + 3a^3c - 54b^2 + 90bc^4 + 21bc - 80c^5 + 24c^2$$

Good Luck!