

**Factor by grouping common terms****1**

Which answer is the same expression as this
 $y(y + 7)$

- | | |
|--------------|---------------|
| A $y + 7$ | B $7y^2 + 7y$ |
| C $y^7 + 7y$ | D $2y^2 + 7y$ |
| E $y^2 + 7y$ | F $y - 7$ |

2

Which answer is the same expression as this
 $3w - 18$

- | | |
|----------------|--------------|
| A $(w^3 + 18)$ | B $3(w - 6)$ |
|----------------|--------------|

3

Which answer is the same expression as this
 $21t^2 + 35t$

- | | |
|----------------|---------------|
| A $7(7t + t)$ | B $5t + t$ |
| C $t(t - 5)$ | D $5(7t - t)$ |
| E $7t(3t + 5)$ | |

4

Which answer is the same expression as this
 $14nw + 49n$

- | | |
|----------------|----------------|
| A $147(n - w)$ | B $7n(2w + 7)$ |
| C $7w(n - 7)$ | D $7n(w - 7)$ |
| E $n(w - 7)$ | |

5

Multiply and write the answer with like terms grouped.

$$2y(-5x^2y^2 + 5y^2 - 2)$$

- | |
|----------------------------|
| A $-10x^2y^3 + 10y^3 - 4y$ |
| B $10y^3 - 4y$ |
| C $10x^2y^3 + 10y^3 + 4y$ |
| D $-10x^2y^2 + 10y^2 - 4$ |

6

Which answer is the same expression as this
 $(w + 7)(q + 7)$

- | |
|------------------------|
| A $7wq + 7q + 7w + 49$ |
| B $wq + 7q + 7w + 49$ |

7

Find common factors of the first 2 and last 2 terms

$$4p^2 + 24p + 5p + 30$$

- | |
|----------------------------|
| A $4p(p + 6) + 5(p + 6)$ |
| B $4p(4p + 5) - 6(4p + 5)$ |



Factor by grouping common terms

8

Consolidate the shared common factor to create 2 binomial factors

$$z^2(z-2) - 9(z-2)$$

A

$$(z+2)(z^2+9)$$

B

$$(z-2)(z^2-9)$$

9

Is this factoring step correct?

$$\begin{aligned} r^2(r-3) - 16(r-3) \\ = (r-3)(r^2-16) \end{aligned}$$

A

Yes

B

No

10

Is this factoring step correct?

$$\begin{aligned} n^3 - 6n^2 + 2n - 12 \\ = n^2(n-6) + 2(n-6) \end{aligned}$$

A

Yes

B

No

11

Is this factoring step correct?

$$\begin{aligned} z^3 - 2z^2 + 4z - 8 \\ = (z+2)(z^2-8) \end{aligned}$$

A

Yes

B

No

12

Which answer is the same expression as this

$$6qt + 6t + 8q + 8$$

A

$$(3q+6)(2t+2)$$

B

$$(2q+2)(3t+4)$$

13

Which answer is the same expression as this

$$rw + 5w - 5r - 25$$

A

$$(r+25)(w-5)$$

B

$$(r+5)(w-5)$$

C

$$(r-5)(w+0)$$

D

$$(r+5)(w-10)$$

E

$$(r-5)(w+5)$$

14

Find common factors of the first 2 and last 2 terms, and solve.

$$20y^2 + 16y - 15y - 12$$

A

$$(4y+4)(y+3)$$

B

$$(4y+4)(12y-3)$$

C

$$(5y+4)(4y-3)$$

D

$$(4y-4)(45y-3)$$

E

$$(1y-4)(5y+3)$$

15

Use grouping to remove a factor from this order 3 polynomial

$$q^3 - 5q^2 + 3q - 15$$

A

$$(q+5)(q^2-3)$$

B

$$(q-5)(q^2+3)$$