



Basic Derivatives - Negative Integer Power with Coefficient to Derivative

1 Find the derivative $f'(x)$ using the power rule.

$$f(x) = -4x^{-4}$$

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|---|--------------------|---|--------------------|
| A | $f'(x) = -4x^{-5}$ | B | $f'(x) = 16x^{-5}$ |
| C | $f'(x) = 16x^{-3}$ | D | $f'(x) = 16x^{-4}$ |

2 Find the derivative $f'(x)$ using the power rule.

$$f(x) = -3x^{-5}$$

- | | | | |
|---|--------------------|---|--------------------|
| A | $f'(x) = 15x^{-5}$ | B | $f'(x) = 15x^{-4}$ |
| C | $f'(x) = 15x^{-6}$ | D | $f'(x) = -3x^{-6}$ |

3 Find the derivative $f'(x)$ using the power rule.

$$f(x) = -9x^{-3}$$

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|---|--------------------|---|--------------------|
| A | $f'(x) = 27x^{-4}$ | B | $f'(x) = -9x^{-4}$ |
| C | $f'(x) = 27x^{-2}$ | D | $f'(x) = 27x^{-3}$ |

4 Find the derivative $f'(x)$ using the power rule.

$$f(x) = -6x^{-3}$$

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|---|--------------------|---|--------------------|
| A | $f'(x) = 18x^{-2}$ | B | $f'(x) = 18x^{-4}$ |
| C | $f'(x) = -6x^{-4}$ | D | $f'(x) = 18x^{-3}$ |

5 Find the derivative $f'(x)$ using the power rule.

$$f(x) = -9x^{-5}$$

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|---|--------------------|---|--------------------|
| A | $f'(x) = 45x^{-4}$ | B | $f'(x) = 45x^{-6}$ |
| C | $f'(x) = -9x^{-6}$ | D | $f'(x) = 45x^{-5}$ |

6 Find the derivative $f'(x)$ using the power rule.

$$f(x) = 7x^{-2}$$

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|---|---------------------|---|---------------------|
| A | $f'(x) = -14x^{-2}$ | B | $f'(x) = 7x^{-3}$ |
| C | $f'(x) = -14x^{-3}$ | D | $f'(x) = -14x^{-1}$ |

7 Find the derivative $f'(x)$ using the power rule.

$$f(x) = 8x^{-2}$$

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|---|---------------------|---|---------------------|
| A | $f'(x) = -16x^{-1}$ | B | $f'(x) = 8x^{-3}$ |
| C | $f'(x) = -16x^{-3}$ | D | $f'(x) = -16x^{-2}$ |

8 Find the derivative $f'(x)$ using the power rule.

$$f(x) = -3x^{-2}$$

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|---|--------------------|---|-------------------|
| A | $f'(x) = -3x^{-3}$ | B | $f'(x) = 6x^{-1}$ |
| C | $f'(x) = 6x^{-3}$ | D | $f'(x) = 6x^{-2}$ |