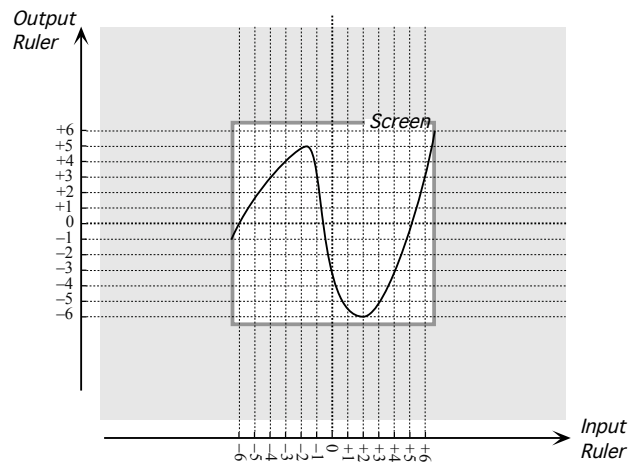


MATH 161 REVIEW I Questions

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[Run: 08/24/2010 at 20:7. Seed: 576. Order of Checkable Items: List.]

I-1. Given the function f whose *quantitative bounded graph* is



which input(s), if any, will give the output +3?

I-2. Given the function f specified by the global input-output rule

$$x \xrightarrow{f} f(x) = (-54.03)x^{+4}$$

find the local graph near ∞

I-3. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = +83.17x^{+5}$$

find the *local graph* of f near 0?

I-4. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = (-73.05)x^{+2}$$

find Height-sign $f|_{\text{near } \infty}$

I-5. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = (+91.03)x^{+4}$$

find Slope-sign $f|_{\text{near } \infty}$.

I-6. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = (-42.27)x^{+4}$$

find Slope-sign $f|_{\text{near } 0}$.

I-7. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = (-18.83)x^{+3}$$

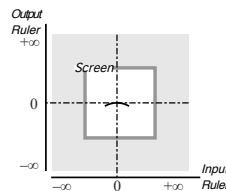
find Concavity-sign $f|_{\text{near } \infty}$.

I-8. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = (-18.43)x^{+5}$$

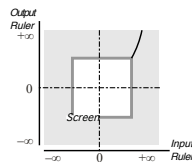
find Concavity-sign f near 0 .

I-9. Given the *power* function f whose local graph near 0 is



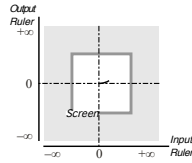
find its local graph near ∞ .

I-10. Given the *power* function f whose local graph near $+\infty$ is



find its local graph near 0^+ .

I-11. Given the *power* function f whose local graph near 0^+ is



find its local graph near $-\infty$.

I-12. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = (+12.87)x^{-5}$$

what is its local graph near ∞

I-13. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = +13.06x^{-4}$$

find the *local graph* of f near 0?

I-14. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = (-18.22)x^{-6}$$

find Height-sign $f|_{\text{near } 0}$

I-15. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = (-29.73)x^{-4}$$

find Slope-sign $f|_{\text{near } \infty}$

I-16. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = (-22.33)x^{-6}$$

find Slope-sign $f|_{\text{near } 0}$

I-17. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = (-53.55)x^{-6}$$

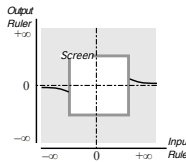
find Concavity-sign $f|_{\text{near } \infty}$

I-18. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = (-54.37)x^{-3}$$

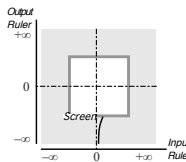
find Concavity-sign f near 0.

I-19. Given the *power* function f whose local graph near ∞ is



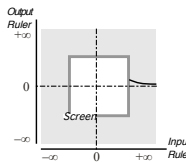
find its local graph near 0.

I-20. Given the *power* function f whose local graph near 0^+ is



find its local graph near $+\infty$.

I-21. Given the *power* function f whose local graph near $+\infty$ is



find its local graph near 0^- .

I-22. Given the function f whose global Input-Output rule is

$$x \xrightarrow{f} f(x) = (-35.73)x^{+1}$$

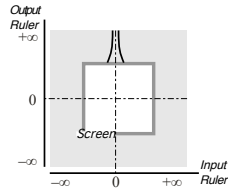
find its local graph near 0.

I-23. Given the function f whose global Input-Output rule is

$$x \xrightarrow{f} f(x) = (-32.28)x^{-1}$$

find its local graph near ∞ .

I-24. Given the function f whose local graph near 0 is



which of the following *must* be features of its global input-output rule:

- M The exponent must be positive
- N The exponent must be negative
- P The exponent must be even
- Q The exponent must be odd
- R The coefficient must be positive
- S The coefficient must be negative

I-25. Given that the *power* function f is such that $\text{Height-sign}f|_{\text{near } 0} = (\text{small}, \text{small})$, which of the following *must* be a feature of its global input-output rule:

- M The exponent must be positive
- N The exponent must be negative
- P The exponent must be even
- Q The exponent must be odd
- R Cannot be.