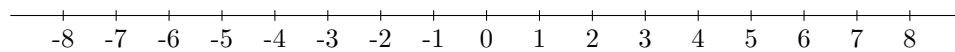


First Name \_\_\_\_\_ Last Name \_\_\_\_\_ Date \_\_\_\_ - \_\_\_\_ - \_\_\_\_ Period \_\_\_\_ Score \_\_\_\_

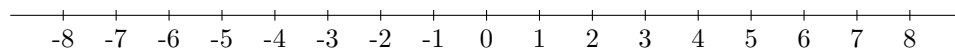
| BE PRECISE  | Integrating  | Applying   | Practicing  | Acquiring   | Awaiting Evidence  |
|---|--|--|---|---|--|
| I can calculate accurately and efficiently, and be precise in all of my math. | Selects and applies the correct procedure and solves all routine AND integrating problems.<br>AND<br>Expresses the answer to the correct level of precision needed for the problem (including the correct rounding, units, math symbols, labeling, graphing, vocab...) | Selects and applies the correct procedure and solves all routine problems.<br>AND<br>Expresses the answer to the correct level of precision needed for the problem (including the correct rounding, units, math symbols, labeling, graphing, vocab...) | Selects and applies the correct procedure and solves most routine problems.<br>AND<br>Expresses the answer to the correct level of precision needed for the problem (including the correct rounding, units, math symbols, labeling, graphing, vocab...) | Selects and applies the correct procedure and solves some routine problems.<br>AND<br>Attempts to express the answer to the correct level of precision needed for the problem (including the correct rounding, units, math symbols, labeling, graphing, vocab...) | Selects and attempts to apply the correct procedure for some routine problems. |
| Criteria  |  |  |   |   |  |

### Problem.

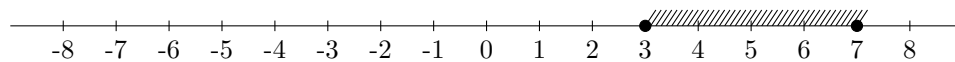
1. Shade the segment represented by the interval  $[-7, 0)$  on the number line. Use  $\bullet$  to indicate a closed endpoint, and  $\circ$  to indicate an open endpoint.



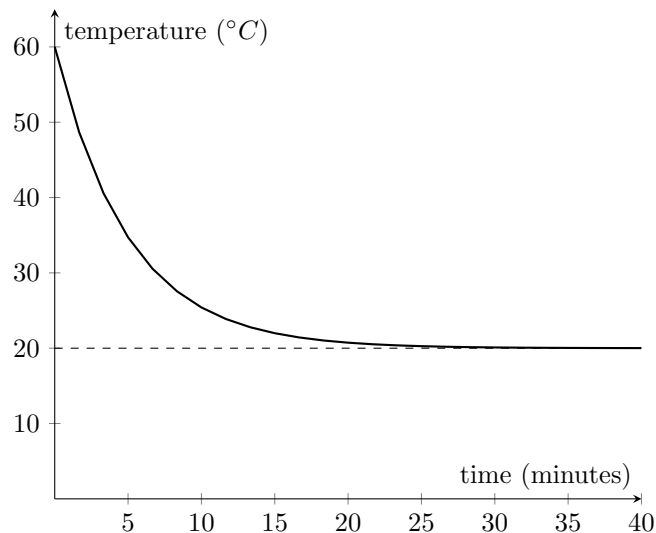
2. Shade the segment represented by the interval  $(-3, \infty)$  on the number line. Use  $\bullet$  to indicate a closed endpoint, and  $\circ$  to indicate an open endpoint.



3. The interval represented by the shaded segment below is \_\_\_\_\_.

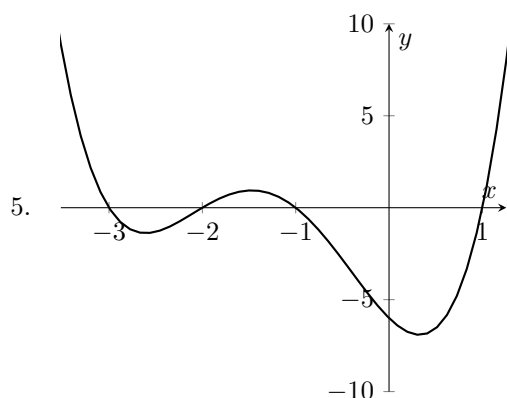


4. The following graph shows the state of an object cooling over time:



- (a) What is the temperature of the object as time approaches infinity? \_\_\_\_\_.
- (b) What can you infer about the room temperature in which this cooling process was taking place? \_\_\_\_\_.

**Direction.** Describe the end behaviors of the graphs below. If the graph doesn't have a definite end behavior, put "N/A".



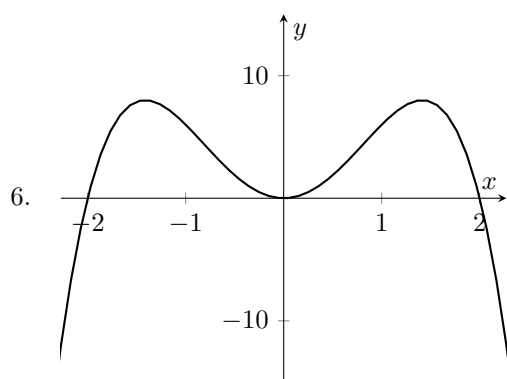
$$y = x^4 + 5x^3 + 5x^2 - 5x - 6.$$

As  $x$  approaches  $\infty$ ,  $y$  approaches \_\_\_\_\_.

As  $x$  approaches  $-\infty$ ,  $y$  approaches \_\_\_\_\_.

Does the graph have an absolute maximum? \_\_\_\_\_.

Does the graph have an absolute minimum? \_\_\_\_\_.



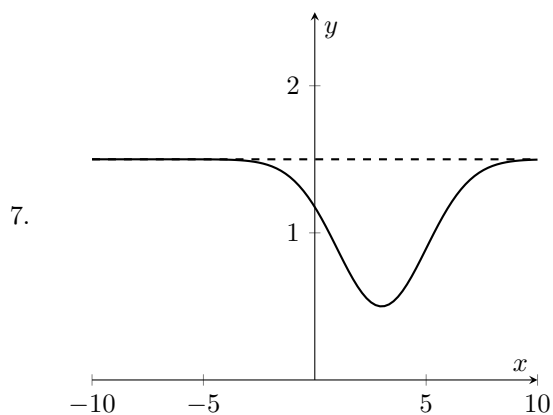
$$y = -2x^4 + 8x^2.$$

As  $x$  approaches  $\infty$ ,  $y$  approaches \_\_\_\_\_.

As  $x$  approaches  $-\infty$ ,  $y$  approaches \_\_\_\_\_.

Does the graph have an absolute maximum? \_\_\_\_\_.

Does the graph have an absolute minimum? \_\_\_\_\_.



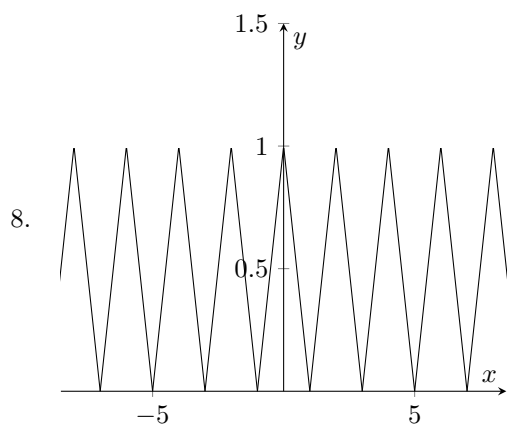
$$y = -e^{-(x-3)^2/8} + 1.5.$$

As  $x$  approaches  $\infty$ ,  $y$  approaches \_\_\_\_\_.

As  $x$  approaches  $-\infty$ ,  $y$  approaches \_\_\_\_\_.

Does the graph have an absolute maximum? \_\_\_\_\_.

Does the graph have an absolute minimum? \_\_\_\_\_.



$y = f(x)$  is a periodic function that repeats the same pattern over and over.

As  $x$  approaches  $\infty$ ,  $y$  approaches \_\_\_\_\_.

As  $x$  approaches  $-\infty$ ,  $y$  approaches \_\_\_\_\_.

Does the graph have an absolute maximum? \_\_\_\_\_.

Does the graph have an absolute minimum? \_\_\_\_\_.