Given that $f(x) = \lceil x \rceil$ is the parent function, describe the transformation of $g(x)$.

10. $g(x) = 2\lceil x \rceil - 7$

11. $g(x) = -\lceil 4x \rceil$

12. $g(x) = \lfloor -x + 1 \rfloor + 5$

Solve the following equations.

13. $2\lfloor x \rfloor = 10$

14. $\lfloor x + 4 \rfloor + 5 = 4$

15. $\left\lfloor \frac{1}{2}x - 1 \right\rfloor + 4 = 0$

16. $\lceil -4x \rceil - 9 = -5$

17. $-\lceil x - 5 \rceil = 15$

18. $\frac{1}{3}\left\lceil x + \frac{1}{2} \right\rceil = 8$

Create a function to model the following situations.

19. You want to bring cupcakes to school for your birthday. Each case comes with 12 cupcakes and costs $6.95. Create a function that models the number of cases you should buy in terms of the number of students in your class.

20. Renting jet skis in the Bahamas costs $40 per hour plus a $15 gas fee. Create a function that models the cost in terms of the number of hours the jet skis were rented.

21. Laser tag at Fred's Family Fun costs $6 for every segment of 15 minutes of play, plus a $5 battery fee. Create a function that models the cost in terms of the number of minutes playing tag.

22. A textbook company charges $725 for each case of books that it sells. A case can contain any number of books up to 30 books. They charge a flat shipping fee of $100. Create a function that models the cost in terms of the number of books needed.

23. Long distance phone calls cost $0.99 for the first minute, and $0.39 for every minute after that. Create a function that models the cost in terms of the duration of the phone call in minutes.

24. You're ordering pizza for your birthday party. You estimate that each pizza will serve 4 people. Create a function that models the number of pizzas you need to order in terms of the number of people attending.

Given that $f(x) = \lceil x \rceil$ is the parent function, describe the transformation of $g(x)$.

10. $g(x) = 2\lceil x \rceil - 7$

11. $g(x) = -\lceil 4x \rceil$

12. $g(x) = \lfloor -x + 1 \rfloor + 5$

Solve the following equations.

13. $2\lfloor x \rfloor = 10$

14. $\lfloor x + 4 \rfloor + 5 = 4$

15. $\left\lfloor \frac{1}{2}x - 1 \right\rfloor + 4 = 0$

16. $\lceil -4x \rceil - 9 = -5$

17. $-\lceil x - 5 \rceil = 15$

18. $\frac{1}{3}\left\lceil x + \frac{1}{2} \right\rceil = 8$

Create a function to model the following situations.

19. You want to bring cupcakes to school for your birthday. Each case comes with 12 cupcakes and costs \$6.95. Create a function that models the number of cases you should buy in terms of the number of students in your class.

$C = \left\lceil \frac{x+11}{12} \right\rceil$ Big C = # cases, x = # students

20. Renting jet skis in the Bahamas costs \$40 per hour plus a \$15 gas fee. Create a function that models the cost in terms of the number of hours the jet skis were rented.

21. Laser tag at Fred's Family Fun costs \$6 for every segment of 15 minutes of play, plus a \$5 battery fee. Create a function that models the cost in terms of the number of minutes playing tag.

m = # minutes $C = 6\left\lceil \frac{m+14}{15} \right\rceil + 5$

22. A textbook company charges \$725 for each case of books that it sells. A case can contain any number of books up to 30 books. They charge a flat shipping fee of \$100. Create a function that models the cost in terms of the number of books needed.

$C = 725\left\lceil \frac{b+29}{30} \right\rceil + 100$

23. Long distance phone calls cost \$0.99 for the first minute, and \$0.39 for every minute after that. Create a function that models the cost in terms of the duration of the phone call in minutes.

S = # seconds $C = 0.99 + 0.39\left\lceil \frac{S+59}{60} \right\rceil$

24. You're ordering pizza for your birthday party. You estimate that each pizza will serve 4 people. Create a function that models the number of pizzas you need to order in terms of the number of people attending.

P = # pizzas $P = \left\lceil \frac{p+3}{4} \right\rceil$

p = # people