

Station 1 answers

1. not a function

2. function

3. function

4. a. $c(x) = \begin{cases} 1.5x & 0 \leq x \leq 3 \\ 4.5 & x > 3 \end{cases}$

b. \$3.75

c. Domain: $[0, \infty)$ The number of hours must be greater than or equal to 0.

5. D: $(-\infty, \infty)$, R: $[-3, \infty)$

6. D: $(-\infty, 5]$, R: $[0, \infty)$

Station 2 answers

7. y-int: $(0, -12)$, x-ints: $(-1, 0)$, $(3, 0)$

8. y-int: $(0, 0)$, x-ints: $(-3, 0)$, $(-1, 0)$, $(0, 0)$

9. D

10. continuous

11. discontinuous - removable discontinuity

12. -157

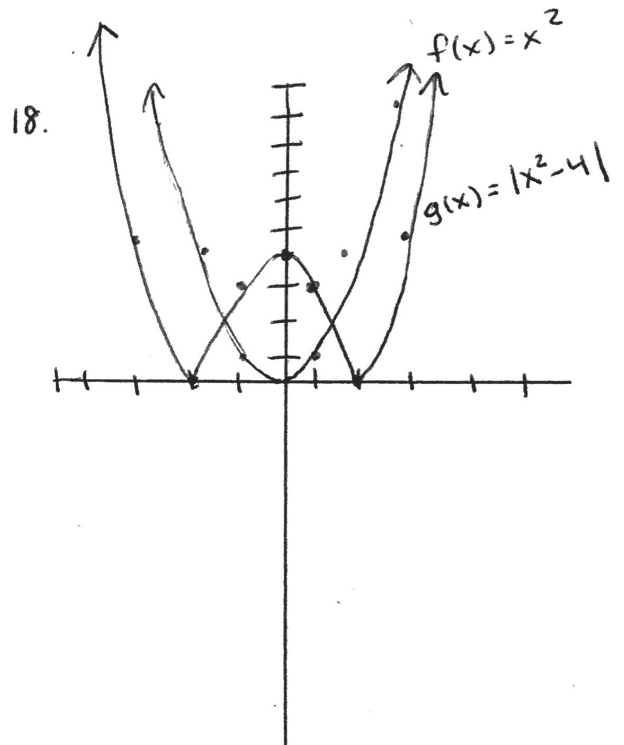
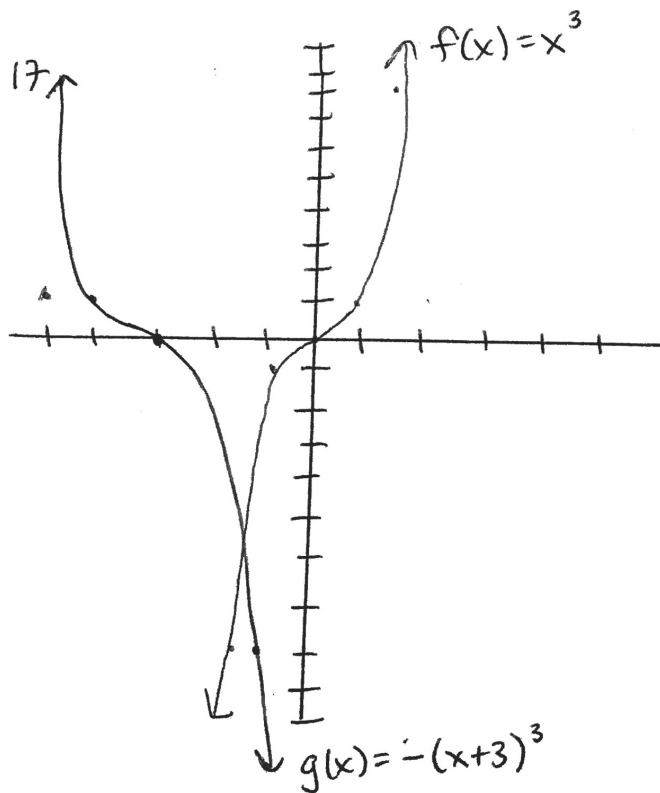
13. $\frac{1}{4}$

Station 3 answers

14. increasing $(-\infty, 2.5)$
decreasing $(2.5, \infty)$

15. increasing $(-1.5, 0), (1.5, \infty)$
decreasing $(-\infty, -1.5), (0, 1.5)$

16. H



Station 4 answers

$$19. \left(\frac{f}{g}\right)(x) = \frac{1}{x+6} \quad \{x \mid x \neq \pm 6, x \in \mathbb{R}\}$$

$$20. [g \circ f](x) = x^2 - 12x \quad \mathbb{R}$$

$$21. a. C = \frac{5}{9}(F - 32)$$

$$b. f(x) = \frac{5}{9}x \quad g(x) = x - 32$$

$$22. \text{yes, } f^{-1}(x) = \sqrt[3]{x} + 2$$

$$23. \text{yes, } f^{-1}(x) = \frac{8x+3}{x-1} \quad x \neq 1$$

$$24. \text{yes, } f^{-1}(x) = -x^2 + 4 \quad x \geq 0$$

25. no