

Let:  $f(x) = 2x - 5$

$g(x) = |7 - 3x|$

$h(x) = x^2 - 3x + 4$

$$r(x) = \begin{cases} x^2 & x \leq -3 \\ 5 & -3 < x \leq 4 \\ 2x + 3 & x > 4 \end{cases}$$

Evaluate the following using the functions above.

- |               |                 |                |
|---------------|-----------------|----------------|
| 1. $f(g(2))$  | 2. $f(h(-1))$   | 3. $f(r(0))$   |
| 4. $g(h(0))$  | 5. $h(r(-3))$   | 6. $r(f(2))$   |
| 7. $r(h(1))$  | 8. $h(h(2))$    | 9. $r(r(-4))$  |
| 10. $h(g(2))$ | 11. $f(h(1/2))$ | 12. $g(f(-2))$ |

Use the functions at the right to answer the following questions.

- |               |                            |
|---------------|----------------------------|
| 13. $f(g(2))$ | 14. $f(g(0))$              |
| 15. $g(f(0))$ | 16. $g(f(4))$              |
| 17. $h(f(3))$ | 18. $g(h(4))$ (think!!)    |
| 19. $f(h(1))$ | 20. $h(f(g(3)))$ (think!!) |

