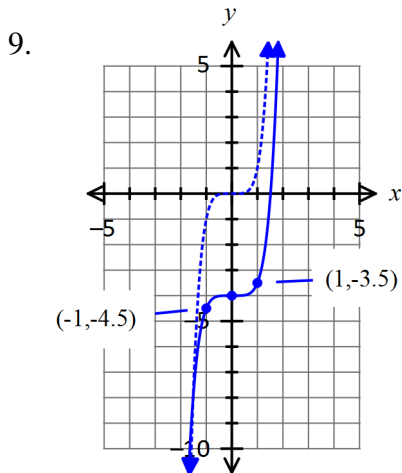


Precalculus

2.3 HW Answers

1. Polynomial, degree 3
3. Not a polynomial – there is a non-integer exponent
5. Polynomial, degree 4
7. Polynomial, degree 1



11. $f(x) = x^3 - 7x^2 + 7x + 15$

13. $f(x) = x^4 + 5x^3 - 6x^2 - 32x + 32$

15. Zero: 5, multiplicity 3, crosses
y-intercept: 500

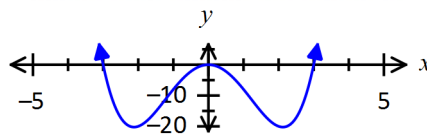
End behavior: $y = x^5$; down on left, up on right

Max # of turning points: 4

17. Zeros: -3, multiplicity 1, crosses
0, multiplicity 2, touches
3, multiplicity 1, crosses
y-intercept: 0

End behavior: $y = x^4$; both ends up

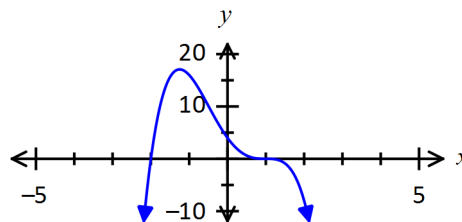
Max number of turning points: 3



19. Zeros: -2, multiplicity 1, crosses
1, multiplicity 3, crosses
y-intercept: 4

End behavior: $y = -2x^4$; both ends down

Max number of turning points: 3



21. Zeros: $-\sqrt{5}$, multiplicity 1, crosses
0, multiplicity 1, crosses
 $\sqrt{5}$, multiplicity 1, crosses
y-intercept: 0

End behavior: $y = -4x^3$; up on left, down on right

Max number of turning points: 2

