Name: $\qquad$ Date: $\qquad$

| Learning Goal 3.3 | Solving equations algebraically and graphically. |
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## More Questions

1. Consider the equation $f(x)=x^{3}+4 x^{2}+5 x+2$.

| Degree | Leading <br> Coefficient | Constant | Domain | $y$-intercept | Number of <br> $x$-intercepts |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |

a. What is the end behaviour of the function?
b. Factor the equation.
c. Find the solutions or roots of the equation. What multiplicity does each have?
2. Consider the equation $g(x)=10 x^{3}+19 x^{2}+2 x-7$.

| Degree | Leading <br> Coefficient | Constant | Domain | $y$-intercept | Number of <br> $x$ - intercepts |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |

d. What is the end behaviour of the function?
e. Factor the equation.
f. Find the solutions or roots of the equation. What multiplicity does each have?

