Warm Up Block wk 16

Simplify.

1. $5\sqrt[3]{56}-2\sqrt[3]{16}+\sqrt[3]{432}$

$10\sqrt[3]{7}+2\sqrt[3]{2}$

2. $\sqrt[4]{\frac{10a^9c^2d^2}{15a^5c^7d^3}}$

$\frac{a\sqrt[4]{54c^3d^3}}{3c^2d}$

3. $\left(2\sqrt{5}+3\sqrt{2}\right)^2$

$38+12\sqrt{10}$

4. $\frac{2+3\sqrt{2}}{4-\sqrt{2}}$

$1+\sqrt{2}$

5. State all possible rational roots.

$P(x)=x^9-x^4+18$

$\pm1,\pm2,\pm3,\pm6,\pm9,\pm18$

6. Find all zeroes for the function

$P(x)=3x^4-6x^3-6x^2+9x$

$\left\{0,1,\frac{1\pm\sqrt{13}}{2}\right\}$

7. Use long division and synthetic division to find the quotient:

$(2x^3-5x^2-28x+15)\div(x-3)$

$2x^2+x-25-\frac{60}{x-3}$

8. Use synthetic division to determine the value of P(-2) when

$P(x)=2x^3+5x^2-7x-3$

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