

# Algebra II Homework HW21022018

Turn in what you have completed in class. Do the rest for homework.

**Write each expression in radical form.**

1)  $(10v)^{\frac{7}{6}}$

2)  $n^{\frac{3}{4}}$

3)  $(10p)^{\frac{5}{3}}$

4)  $x^{\frac{2}{5}}$

5)  $(6x)^{\frac{5}{3}}$

6)  $(6x)^{\frac{5}{2}}$

7)  $(5m)^{\frac{2}{3}}$

8)  $(6p)^{\frac{1}{2}}$

9)  $(5n)^{\frac{5}{2}}$

10)  $(5x)^{\frac{1}{3}}$

**Factor each completely.**

11)  $3n^2 - 29n + 18$

12)  $7p^2 - 2p - 5$

13)  $42k^2 + 348k + 96$

14)  $7x^2 - 4x - 32$

15)  $35r^3 + 30r^2$

16)  $14p^3 + 78p^2 - 140p$

17)  $14x^2 - 62x + 60$

18)  $7a^2 + 10a - 80$

19)  $5v^4 - 33v^3 + 18v^2$

20)  $12k^2 - 68k - 112$

**Simplify.**

1)  $(r^{12})^{\frac{3}{4}}$

2)  $(a^4)^{\frac{3}{2}}$

3)  $(64r^{18})^{\frac{1}{6}}$

4)  $(64x^3)^{\frac{4}{3}}$

5)  $(25n^4)^{\frac{1}{2}}$

6)  $(n^6)^{\frac{3}{2}}$

7)  $(1000k^6)^{\frac{5}{3}}$

8)  $(343r^6)^{\frac{5}{3}}$

9)  $(343v^9)^{\frac{4}{3}}$

10)  $(81n^2)^{\frac{1}{2}}$

**Simplify. Your answer should contain only positive exponents with no fractional exponents in the denominator.**

1)  $\left(x^{\frac{1}{2}}y^4\right)^{\frac{1}{2}}$

2)  $\left(yx^{\frac{7}{4}}\right)^{-\frac{3}{2}}$

3)  $\left(x^{\frac{1}{4}}y^{\frac{3}{2}}\right)^{\frac{3}{4}}$

4)  $\left(m^{\frac{7}{4}}n^{\frac{7}{4}}\right)^{-\frac{5}{3}}$

5)  $\left(x^{-1}y^{\frac{1}{3}}\right)^{\frac{3}{4}}$

6)  $\left(x^{-\frac{3}{2}}y^2\right)^{-\frac{7}{4}}$

7)  $\left(u^{\frac{2}{3}}\right)^{-1}$

8)  $\left(v^{-\frac{3}{2}}\right)^{-\frac{1}{2}}$

9)  $\left(xy^{\frac{4}{3}}\right)^{\frac{1}{2}}$

10)  $\left(x^{-\frac{4}{3}}y^{\frac{3}{2}}\right)^2$