5-5 Worksheet

#18 $\dfrac{y^2-4y}{y^2+2y} \div \dfrac{y^2-9y+20}{2y^2-9y-5}$

$= \dfrac{y(y-4)}{y(y+2)} \cdot \dfrac{2y^2-10y+1y-5}{(y-4)(y-5)}$

$= \dfrac{2y(y-5)+1(y-5)}{(y+2)(y-5)} = \dfrac{(2y+1)(y-5)}{(y+2)(y-5)}$

$= \dfrac{(2y+1)}{(y+2)}$

(20) $\frac{12a^2}{b} \div \frac{2}{3ab} \div \frac{54a^3}{b}$

$= \frac{b}{12a^2} \cdot \frac{3ab}{2} \cdot \frac{b}{54a^3}$

$= \frac{1}{\cancel{6} \cdot 3 \cdot b} = \frac{b}{3}$

(22) $\frac{3p+6}{9p} \cdot \frac{12p}{p^2-4} \div \frac{18p^3}{2p-4}$

$= \frac{1}{\frac{3(p+2)}{9p}} \cdot \frac{4}{\frac{12p}{(p-2)(p+2)}} \cdot \frac{1}{\frac{2(p-2)}{18p^3}}$

$= \frac{3}{\frac{4}{3 \cdot 3 \cdot p^3}} = \frac{4}{9p^3}$