REVIEW

ex: Simplify.

$2\overline{)50}$
25

a) $-7\sqrt{50}$

$-7\sqrt{25 \cdot 2}$

$-7\sqrt{25}\sqrt{2}$

$-7 \cdot 5 \cdot \sqrt{2}$

$\boxed{-35\sqrt{2}}$

b) $\sqrt{-72} = \sqrt{-1 \cdot 72}$

$9\overline{)72}$
$4\overline{)8}$
2

$= \sqrt{-1 \cdot 9 \cdot 4 \cdot 2}$

$= \sqrt{-1} \cdot \sqrt{9} \cdot \sqrt{4} \cdot \sqrt{2}$

$= i \cdot 3 \cdot 2 \cdot \sqrt{2}$

$= \boxed{6i\sqrt{2}}$

REVIEW

ex: Simplify.

c) $\frac{1}{\sqrt{6}} \cdot \frac{\sqrt{6}}{\sqrt{6}} = \frac{\sqrt{6}}{\sqrt{36}}$

rationalize the denominator

$= \boxed{\frac{\sqrt{6}}{6}}$

e) $\sqrt{160}$

$16 \mid 160$

$2 \mid 10$

5

$\sqrt{16 \cdot 2 \cdot 5}$

$\sqrt{16}\,\sqrt{2}\,\sqrt{5}$

$4 \cdot \sqrt{2} \cdot \sqrt{5} = \boxed{4\sqrt{10}}$

d) $\frac{5}{(2+\sqrt{5})} \cdot \frac{(2-\sqrt{5})}{(2-\sqrt{5})}$ conjugate

$= \frac{10 - 5\sqrt{5}}{4 - 2\sqrt{5} + 2\sqrt{5} - \sqrt{25}}$

$= \frac{10 - 5\sqrt{5}}{-1}$

$= \frac{10}{-1} - \frac{5\sqrt{5}}{-1} = \boxed{-10 + 5\sqrt{5}}$

f) $\frac{\sqrt{5}}{\sqrt{35}} = \frac{\sqrt{1}}{\sqrt{7}} = \frac{1}{\sqrt{7}} \cdot \frac{\sqrt{7}}{\sqrt{7}} = \frac{\sqrt{7}}{\sqrt{49}} = \boxed{\frac{\sqrt{7}}{7}}$

REVIEW

ex: Solve by factoring.

a) $8x^2 = 20 - 36x$ (+) ← two solutions

gcf $8x^2 + 36x - 20 = 0$

$4(2x^2 + 9x - 5) = 0$

factor

$4(2x-1)(x+5) = 0$

$4 \neq 0$	$2x-1=0$	$x+5=0$
no variable	$2x=1$	$x=-5$
	$x=\frac{1}{2}$	

-10

$2x \cdot 2x$

$-1 \quad +10$

$\div 2$

$1x$

$+5$

REVIEW

ex: Solve by factoring.

Find the roots/solutions.

b) $3x^2 = 21x$ ← Two solutions

gcf $\frac{3x^2}{3x} - \frac{21x}{3x} = 0$

$3x(x-7) = 0$

$\frac{3x}{3} = \frac{0}{3}$ | $x - 7 = 0$

$x = 0$ | $x = 7$

c) $49x^2 = 1$ ← Two solutions

set the equation = 0

no gcf $49x^2 - 1 = 0$ factor

(Dos)

$(7x+1)(7x-1) = 0$

$7x + 1 = 0$ | $7x - 1 = 0$

$7x = -1$ | $7x = 1$

$x = \frac{-1}{7}$ | $x = \frac{1}{7}$