

Lesson 51 Practice (continued)

Developing/ Proficient

Squaring Fractions

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

$$\left(\frac{5}{7}\right)^2 = \frac{25}{49}$$

$$\left(\frac{1}{8}\right)^2 = \frac{1}{64}$$

$$\left(\frac{4}{5}\right)^2 = \frac{16}{25}$$

$$\left(\frac{6}{11}\right)^2 = \frac{36}{121}$$

$$\left(\frac{3}{10}\right)^2 = \frac{9}{100}$$

$$\left(\frac{1}{9}\right)^2 = \frac{1}{81}$$

$$\left(\frac{7}{10}\right)^2 = \frac{49}{100}$$

$$\left(\frac{2}{5}\right)^2 = \frac{4}{25}$$

$$\left(\frac{3}{4}\right)^2 = \frac{9}{16}$$

$$\left(\frac{5}{11}\right)^2 = \frac{25}{121}$$

$$\left(\frac{7}{9}\right)^2 = \frac{49}{81}$$

$$\left(\frac{10}{11}\right)^2 = \frac{100}{121}$$

$$\left(\frac{7}{8}\right)^2 = \frac{49}{64}$$

$$\left(\frac{1}{10}\right)^2 = \frac{1}{100}$$

Developing/ Proficient

Square Root -Fractions

$$1) \sqrt{\frac{4}{16}} = \frac{2}{4} = \frac{1}{2}$$

$$2) \sqrt{\frac{25}{36}} = \frac{5}{6}$$

$$3) \sqrt{\frac{16}{9}} = \frac{4}{3} = 1\frac{1}{3}$$

$$4) \sqrt{\frac{49}{64}} = \frac{7}{8}$$

$$5) \sqrt{\frac{144}{25}} = \frac{12}{5} = 2\frac{2}{5}$$

$$6) \sqrt{\frac{9}{100}} = \frac{3}{10}$$

$$7) \sqrt{\frac{49}{121}} = \frac{7}{11}$$

$$8) \sqrt{\frac{81}{144}} = \frac{9}{12} = \frac{3}{4}$$

$$9) \sqrt{\frac{225}{169}} = \frac{15}{13} = 1\frac{2}{13}$$

$$10) \sqrt{\frac{16}{196}} = \frac{4}{14} = \frac{2}{7}$$

$$11) \sqrt{\frac{64}{81}} = \frac{8}{9}$$

$$12) \sqrt{\frac{1}{121}} = \frac{1}{11}$$

Proficient

Squaring Decimals

$(0.4)^2 = 0.16$

$(1.2)^2 = 1.44$

$(0.8)^2 = 0.64$

$(0.6)^2 = 0.36$

$(2.5)^2 = 6.25$

$(1.3)^2 = 1.69$

$(0.5)^2 = 0.25$

$(1.1)^2 = 1.21$

$(0.2)^2 = 0.04$

$(0.3)^2 = 0.09$

$(2.2)^2 = 4.84$

$(0.4)^2 = 0.16$

$(0.1)^2 = 0.01$

$(0.7)^2 = 0.49$

$(1.5)^2 = 2.25$

$$\begin{array}{r} 2.2 \\ \times 2.2 \\ \hline 44 \\ 440 \\ \hline 4.84 \end{array}$$

Proficient

Square Root - Decimals

1) $\sqrt{0.04} =$

0.2

2) $\sqrt{0.81} =$

0.9

3) $\sqrt{0.64} =$

0.8

4) $\sqrt{1.21} =$

1.1

5) $\sqrt{1.69} =$

1.3

6) $\sqrt{0.25} =$

0.5

7) $\sqrt{0.49} =$

0.7

8) $\sqrt{0.36} =$

0.6

9) $\sqrt{0.09} =$

0.3

10) $\sqrt{1.44} =$

1.2

11) $\sqrt{0.01} =$

0.1

12) $\sqrt{0.16} =$

0.4

Lesson S1 Practice (continued)

Extending

Squaring Fractions

$$\left(-\frac{4}{7}\right)^2 = \frac{16}{49}$$

$$\left(\frac{8}{13}\right)^2 = \frac{64}{169}$$

$$\left(\frac{3}{14}\right)^2 = \frac{9}{196}$$

$$\left(\frac{9}{10}\right)^2 = \frac{81}{100}$$

$$\left(-\frac{3}{5}\right)^2 = \frac{9}{25}$$

$$\left(\frac{11}{12}\right)^2 = \frac{121}{144}$$

$$\left(\frac{2}{-9}\right)^2 = \frac{4}{81}$$

$$\left(\frac{4}{15}\right)^2 = \frac{16}{225}$$

$$\left(\frac{10}{13}\right)^2 = \frac{100}{169}$$

$$-\left(\frac{3}{4}\right)^2 = -\frac{9}{16}$$

$$-\left(\frac{+1}{-6}\right)^2 = -\frac{1}{36}$$

$$\left(-\frac{3}{14}\right)^2 = \frac{9}{196}$$

$$\left(\frac{11}{13}\right)^2 = \frac{121}{169}$$

$$\left(\frac{2}{15}\right)^2 = \frac{4}{225}$$

$$\left(\frac{13}{14}\right)^2 = \frac{169}{196}$$

Extending

Simplify and Find the Square Root

1) $\sqrt{\frac{27}{48} \frac{9}{16}} = $ $\frac{3}{4}$	2) $\sqrt{\frac{5}{320} \frac{1}{64}} = $ $\frac{1}{8}$
3) $\sqrt{\frac{32}{72} \frac{16}{36}} = $ $\frac{4}{6} = \frac{2}{3}$	4) $\sqrt{\frac{200}{128} \frac{100}{64}} = $ $\frac{10}{8} = \frac{5}{4} = 1\frac{1}{4}$
5) $\sqrt{\frac{48}{300} \frac{24}{180} \frac{12}{75} \frac{4}{25}} = $ $\frac{2}{5}$	6) $\sqrt{\frac{324}{441} \frac{108}{441} \frac{36}{49}} = $ $\frac{6}{7}$
7) $\sqrt{\frac{384}{54} \frac{192}{27} \frac{64}{9}} = $ $\frac{8}{3} = 2\frac{2}{3}$	8) $\sqrt{\frac{64}{324} \frac{16}{81}} = $ $\frac{4}{9}$
9) $\sqrt{\frac{196}{400}} = $ $\frac{14}{20} = \frac{7}{10}$	10) $\sqrt{\frac{96}{726} \frac{48}{363} \frac{16}{121}} = $ $\frac{4}{11}$
11) $\sqrt{\frac{175}{343} \frac{25}{49}} = $ $\frac{5}{7}$	12) $\sqrt{\frac{81}{576} \frac{27}{144} \frac{9}{64}} = $ $\frac{3}{8}$

$$3 \overline{) 192} \\ \underline{18} \\ 12$$

Extending

Squaring Decimals

$$(9.4)^2 = 88.36$$

$$(-6.5)^2 = 42.25$$

$$(10.2)^2 = 104.04$$

$$(6.1)^2 = 37.21$$

$$(3.6)^2 = 12.96$$

$$(7.7)^2 = 59.29$$

$$-(5.9)^2 = -34.81$$

$$(1.01)^2 = 1.0201$$

$$(8.2)^2 = 67.24$$

$$-(-7.3)^2 = -53.29$$

$$(-9.4)^2 = 88.36$$

$$(7.5)^2 = 56.25$$

$$(20.1)^2 = 404.01$$

$$(0.11)^2 = 0.0121$$

$$(-8.8)^2 = 77.44$$

*hint: find perfect squares up to $30^2 = 900$ *

Extending

Square Root - Decimals

1) $\sqrt{8.41} = 2.9$

2) $\sqrt{3.61} = 1.9$

3) $\sqrt{2.56} = 1.6$

4) $\sqrt{2.25} = 1.5$

5) $\sqrt{4.84} = 2.2$

6) $\sqrt{7.84} = 2.8$

7) $\sqrt{4.41} = 2.1$

8) $\sqrt{3.24} = 1.8$

9) $\sqrt{6.76} = 2.6$

10) $\sqrt{2.89} = 1.7$

11) $\sqrt{5.76} = 2.4$

12) $\sqrt{7.29} = 2.7$