Warm Up Grade 8

Date: Nov. 16

Quiz Tomorrow

Perfect squares:

1,4,9,16,25,36,49,64,81,100,121,144,169,196,225

Prime Numbers:

2,3,5,7,11,13,17,19,23,29,31,...

1) Use product of perfect squares to find the square root of the following:

(a) 4225

$\sqrt{4225} = \sqrt{25} \times \sqrt{169}$

$= 5 \times 13$

$\sqrt{4225} = 65$

2) Use product of PRIMES to find the square root of the following: (Factor Tree)

(a)784

784

2 | 392

2 | 196

2 | 98

2 | 49

7 | 7

$\sqrt{784} = \sqrt{(2\times2)\times(2\times2)\times(7\times7)}$

Separate

$= \sqrt{2\times2} \times \sqrt{2\times2} \times \sqrt{7\times7}$

$= 2 \times 2 \times 7$

$\sqrt{784} = 28$

3) Square 81 (SHOW WORK YOU DO ON CALCULATOR)

81^2

$= 6561$

4) Find the square root of 676 (SHOW WORK YOU DO ON CALCULATOR)

$\sqrt{676} = 26$

$676 = 26$

Warm Up Grade 8

Date:_____

Quiz

Tomorrow

Prime Numbers:

2,3,5,7,11,13,17,19,23,29,31,...

Perfect squares:

1,4,9,16,25,36,49,64,81,100,121,144,169,196,225

1) Use product of perfect squares to find the square root of the following:

(a) 4225

$\sqrt{4225} = \sqrt{169 \times 25}$

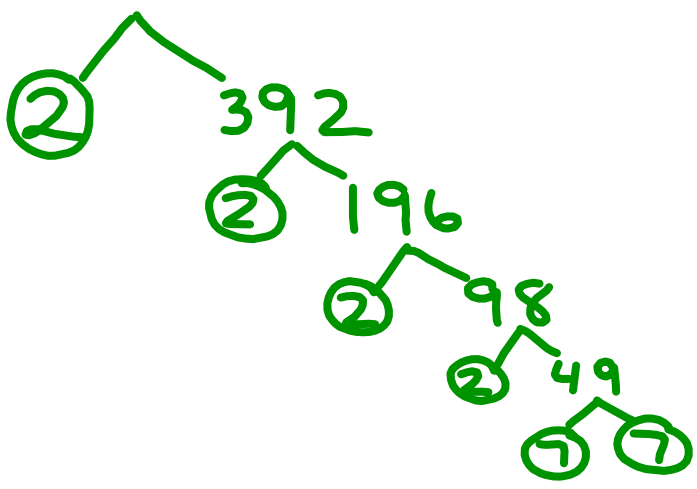
$= \sqrt{169} \times \sqrt{25}$

$= 13 \times 5$

$= \boxed{65}$

2) Use product of PRIMES to find the square root of the following: (Factor Tree)

(a)784



$\sqrt{784} = \sqrt{(2\times2)\times(2\times2)\times(7\times7)}$

$= \sqrt{2\times2} \times \sqrt{2\times2} \times \sqrt{7\times7}$

$= 2 \times 2 \times 7$

$= \boxed{28}$

3) Square 81 (SHOW WORK YOU DO ON CALCULATOR)

$81^2 = 6561$

4) Find the square root of 676 (SHOW WORK YOU DO ON CALCULATOR)

$\sqrt{676} = 26$

Warm Up Grade 8

Prime Numbers:

2,3,5,7,11,13,17,19,23,29,31,...

Perfect squares:

1,4,9,16,25,36,49,64,81,100,121,144,169,196,225

1) Use product of perfect squares to find the square root of the following:
(a) 4356 (b) 6400

2) Use product of PRIMES to find the square root of the following:
(a) 2304

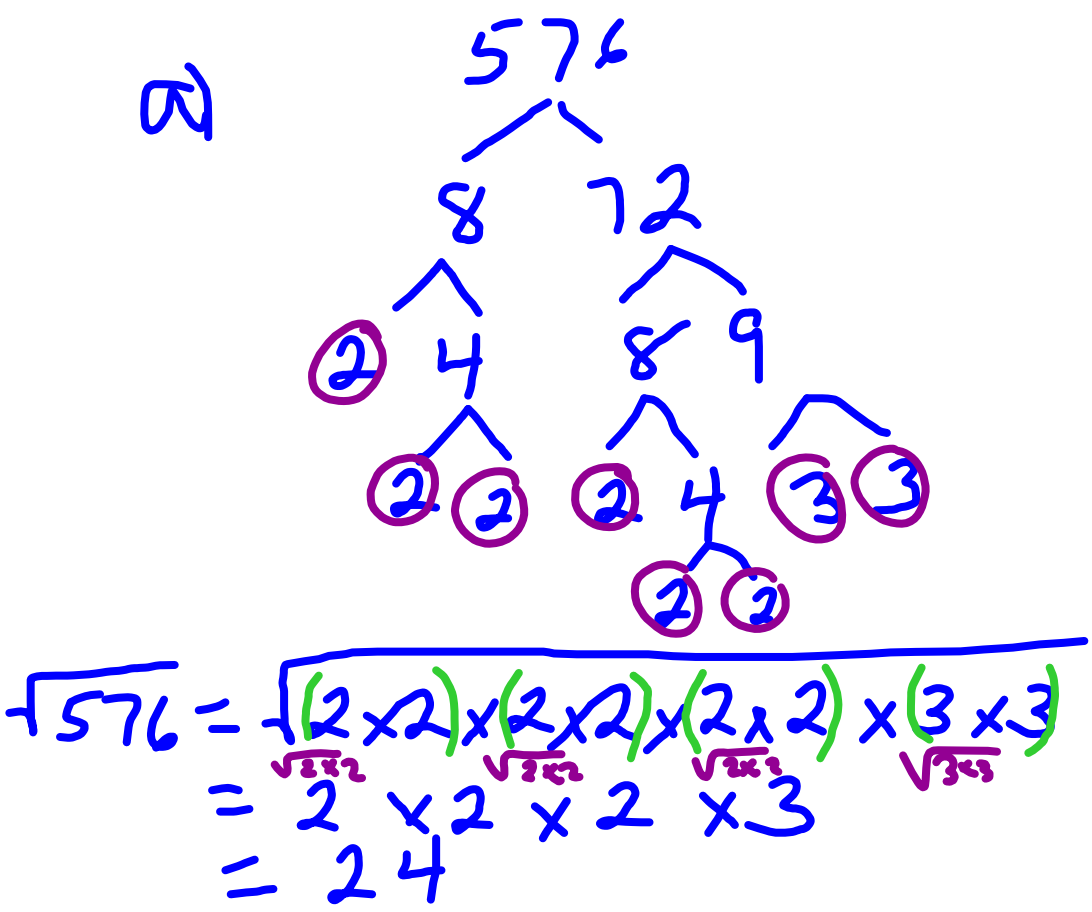
2304

Homework Solutions

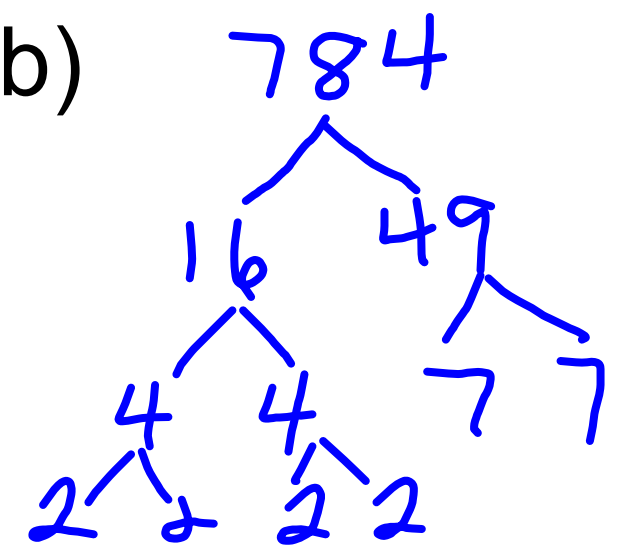
2. Find the square root of the following, using prime factorizaion:

(a) $\sqrt{576}$ (b) $\sqrt{784}$ (c) $\sqrt{2025}$

a)



b)



$784 = 2\times2\times2\times2\times7\times7$

$\sqrt{784} = \sqrt{(2\times2)(2\times2)\times(7\times7)}$

$= 2\times2\times7$

$= 28$

Homework solutionlast day

1. Use the product of perfect squares to find the following square roots:

(a) $\sqrt{1296}$ (b) $\sqrt{1089}$ (c) $\sqrt{1764}$

2. Find the square root of the following, using prime factorizaion:

(a) $\sqrt{576}$ (b) $\sqrt{784}$ (c) $\sqrt{2025}$

1a)

$\sqrt{1296} = \sqrt{36} \times \sqrt{36}$

$= 6 \times 6$

$= 36$

b) $\sqrt{1089} = \sqrt{121} \times \sqrt{9}$

$= 11 \times 3$

$= 33$

or $= \sqrt{9} \times \sqrt{144}$

3×12

36

c) $\sqrt{1764} = \sqrt{36} \times \sqrt{49}$

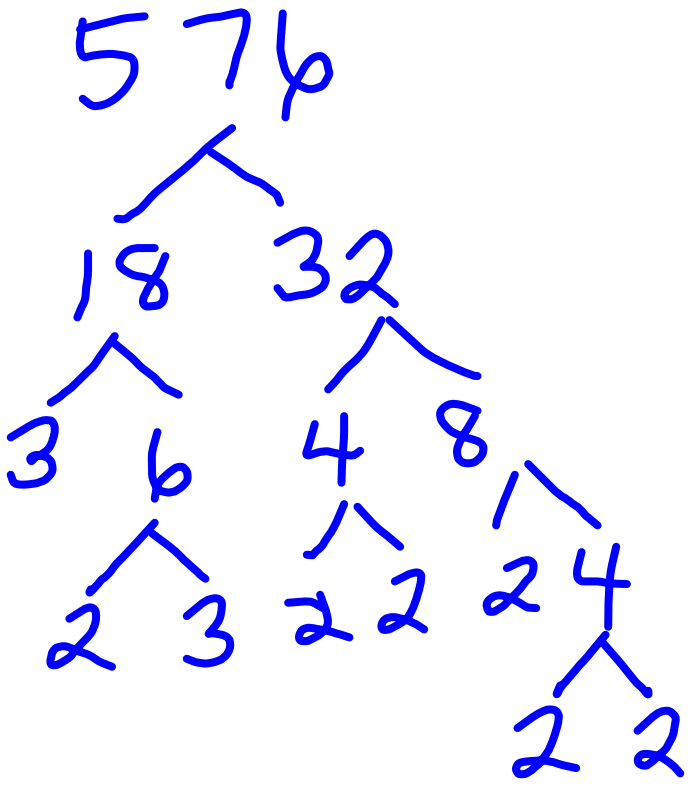
$= 6 \times 7$

$= 42$

d) $\sqrt{9216} = \sqrt{144} \times \sqrt{64}$

$= 12 \times 8$

$= 96$

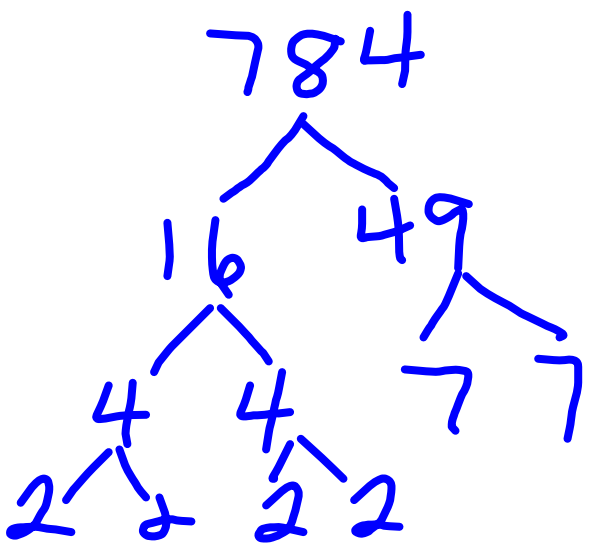


$576 = 2\times2\times2\times2\times2\times2\times3\times3$

$\sqrt{576} = \sqrt{(2\times2)(2\times2)(2\times2)\times(3\times3)}$

$= 2\times2\times2\times3$

$= 24$



$784 = 2\times2\times2\times2\times7\times7$

$\sqrt{784} = \sqrt{(2\times2)(2\times2)\times(7\times7)}$

$= 2\times2\times7$

$= 28$

2025

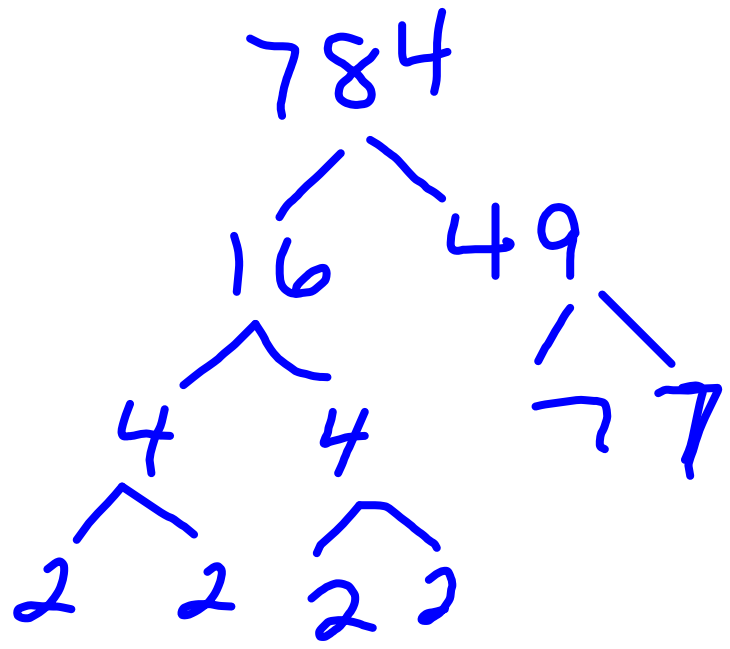
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b) $\sqrt{784}$

$= \sqrt{(2\times2)\times(2\times2)\times(7\times7)}$

$= 2\times2\times7$

$= 28$

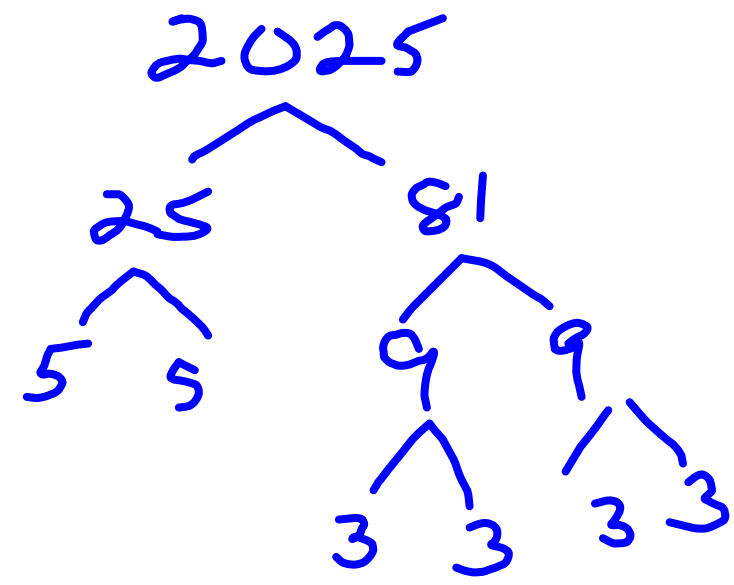


c) $\sqrt{2025}$

$= \sqrt{(5\times5)\times(3\times3)\times(3\times3)}$

$= 5\times3\times3$

$= 45$

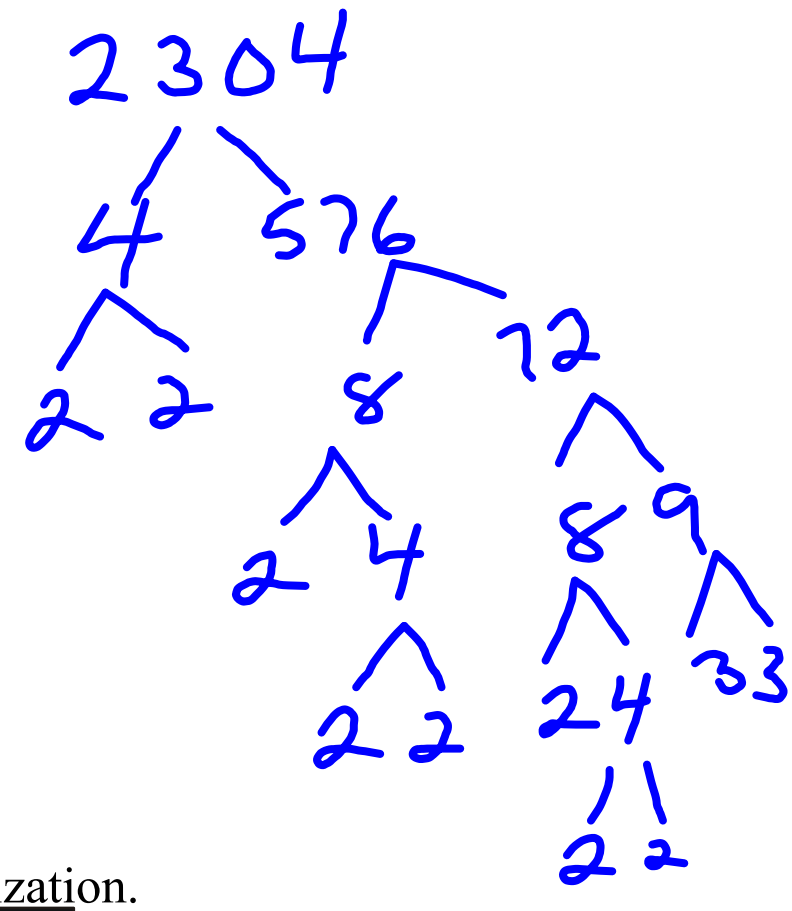


d) $\sqrt{2304}$

$= \sqrt{(2\times2)\times(2\times2)\times(2\times2)\times(2\times2)\times(3\times3)}$

$= 2\times2\times2\times2\times3$

$= 48$



1. Find the square root of the following, using prime factorization.

(a) $\sqrt{729}$ (b) $\sqrt{3025}$ (c) $\sqrt{1225}$

(d) $\sqrt{1764}$ (e) $\sqrt{576}$ (f) $\sqrt{1296}$

2. Use the product of perfect squares to find the following square roots:

(a) $\sqrt{1296}$ (b) $\sqrt{1089}$ (c) $\sqrt{1764}$ (d) $\sqrt{9216}$

Homework Board Questions

have from last day

Prime numbers are numbers that are only divisible by 1 and itself

2, 3, 5, 7, 11, 13, 17, 19, 23, 29,...

Now find the square root of 5184, using each method below:
(a)product of perfect squares
(b)prime factorization
(c)calculator

Perfect Squares	
1	4
9	16
25	36
49	64
81	100
121	144
169	196
225	

a) product of perfect squares →

$\sqrt{5184} = \sqrt{144} \times \sqrt{36}$ (1) pts

$= 12 \times 6$ (1) pts

$\sqrt{5184} = 72$ (1) pts

5184

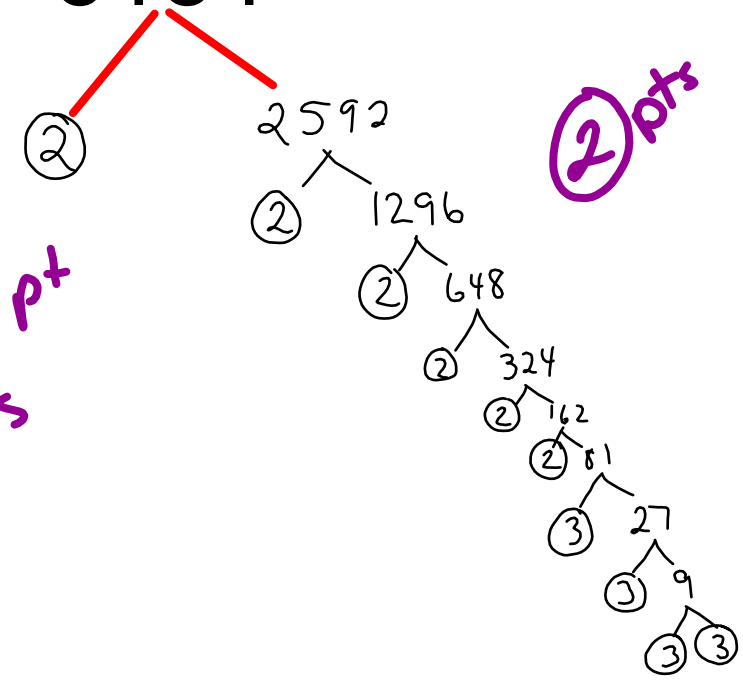
b) prime factorization

$\sqrt{5184} = \sqrt{(2\cdot2)\cdot(2\cdot2)\cdot(2\cdot2)\cdot(3\cdot3)\cdot(3\cdot3)}$

$= \sqrt{2\cdot2} \times \sqrt{2\cdot2} \times \sqrt{2\cdot2} \times \sqrt{3\cdot3} \times \sqrt{3\times3}$ (1) pt

$= 2 \times 2 \times 2 \times 3 \times 3$ (1) pts

$\sqrt{5184} = 72$ (1) pts



c) Calculator

$\sqrt{5184} = 72$

Now find the $\sqrt{600}$, using each method below:
(a)product of perfect squares
(b)prime factorization

a) $\sqrt{1600}$

$= \sqrt{16 \times 100}$

$= \sqrt{16} \times \sqrt{100}$

$= 4 \times 10$

$\sqrt{1600} = 40$

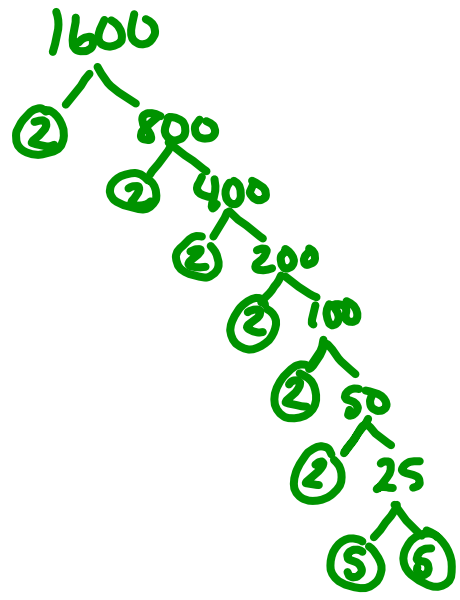
b) $\sqrt{1600}$

$= \sqrt{2 \cdot 2} \times \sqrt{2 \cdot 2} \times \sqrt{2 \cdot 2} \times \sqrt{5 \times 5}$

$= 2 \times 2 \times 2 \times 5$

$\sqrt{1600} = 40$

Perfect Squares	
1	4
9	16
25	36
49	64
81	100
121	144
169	196
225	





Quiz Tomorrow



Similar to warm up

Find Square root Using Product of 2 perfect squares

Find Square root Using Prime Factorization

QUIZ TOMORROW

Homework (Grade 8) Gr. 8 you try more practice

1. Use the product of perfect squares to find the following square roots:

a) $\sqrt{1225}$ b) $\sqrt{7744}$

2. Find the square root of the following, using prime factorizaion:

(a) $\sqrt{1444}$ **b)** $\sqrt{900}$ **c)** $\sqrt{10404}$ d) $\sqrt{441}$

3) Square the following(Use a calculator but show work)

a) 81 b)25 c) 19 d) $\sqrt{9}$ e)$\sqrt{48}$

4) Find the square root of the following(Use a calculator but show work)

a)121 b) 441 c) 1444 d) 15^2 e) 85^2

Perfect squares:

1,4,9,16,25,36,49,64,81,100,121,144,169,196,225

Prime Numbers:

2,3,5,7,11,13,17,19,23,29,31,...

1. Use the product of perfect squares to find the following square roots:

(a) $\sqrt{5929}$

$= \sqrt{121} \times \sqrt{49}$

$= 11 \times 7$

$= 77$

$\sqrt{5929} = 77$

(b) $\sqrt{576}$

$= \sqrt{144} \times \sqrt{4}$

$= 12 \times 2$

$= 24$

$\sqrt{576} = 24$

(c) $\sqrt{7056}$

$= \sqrt{196} \times \sqrt{36}$

$= 14 \times 6$

$= 84$

$\sqrt{7056} = 84$

2. Find the square root of the following, using prime factorizaion:

(a) $\sqrt{1444}$ **(b)** $\sqrt{784}$ **(c)** $\sqrt{2025}$ **(d)** $\sqrt{2304}$

1. Find the square root of the following, using prime factorization.

(a) $\sqrt{729}$ (b) $\sqrt{3025}$ (c) $\sqrt{1225}$

(d) $\sqrt{1764}$ (e) $\sqrt{576}$ (f) $\sqrt{1296}$

2. Use the product of perfect squares to find the following square roots:

(a) $\sqrt{1296}$ (b) $\sqrt{1089}$ (c) $\sqrt{1764}$ (d) $\sqrt{9216}$