7th Grade
Math

Skills Needed:

- Multiplication Facts (Times Tables) from 0 to 12
  - Goals: Need to be able to recite each times table in less than 15 seconds!
- Fractions:
  - Equivalent Fractions
    - Example: 1/2 = 2/4 = 3/6 = 4/8, etc.
  - Simplest Form
    - Example: 15/45 → 1/3, 14/16 → 7/8
  - Convert Fractions from mixed number to improper fractions, improper fractions to mixed numbers, fractions to decimals, and decimals to fractions
    - Examples: 1 ½ = 3/2
      5/4 = 1 ¼
      ¾ = 0.75
      0.25 = 25/100 = ¼
- Area and Perimeter
  - Calculate the perimeter of a rectangle
    - $P = 2(L + W)$
  - Calculate the area of a figure
    - $A = L \times W$
- Exponents: Make a chart, memorize if you can!
  - Squares: Know your squares (example: $1^2 = 1 \times 1 = 1$, $2^2 = 2 \times 2 = 4$, etc.)
    - From 1^2 to 12^2
  - Cubes: Know your cubes (example: $1^3 = 1 \times 1 \times 1 = 1$, $2^3 = 2 \times 2 \times 2 = 8$, etc.)
    - From 1^3 to 12^3
  - Powers: Know your powers with base 2.
    Example: $2^0 = 1$,
    $2^1 = 2$
    $2^2 = 2 \times 2 = 4$
    $2^3 = 2 \times 2 \times 2 = 8$
    $2^4 = 2 \times 2 \times 2 \times 2 = 16$
    …and so on until 2^{12}
    - From power of 0 to 12 for 2's, 3's, 4's, 5's, and 10's

Practice:

- Do all the attached practice pages!

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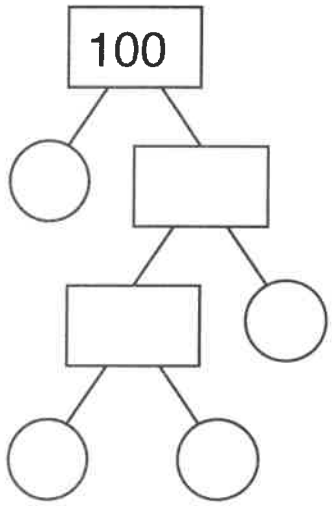
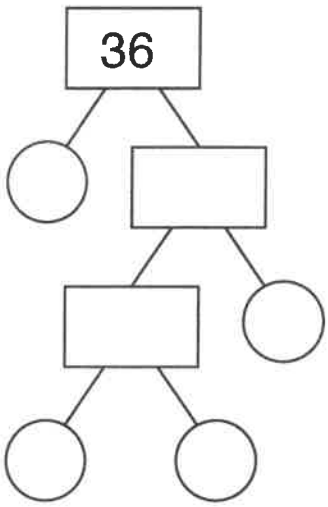
Find the Prime Factors of the Numbers

1)



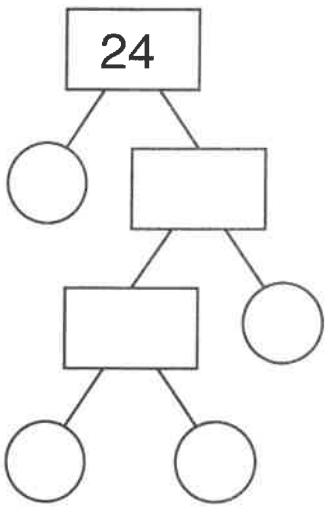
Prime Factors
_ x _ x _ x _ = 100

2)



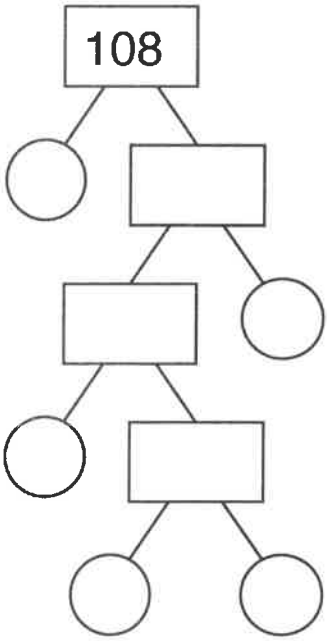
Prime Factors
_ x _ x _ x _ = 36

3)



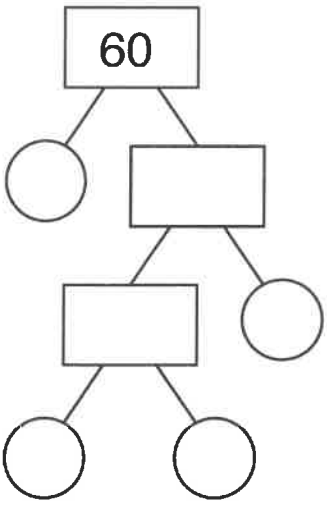
Prime Factors
_ x _ x _ x _ = 24

4)



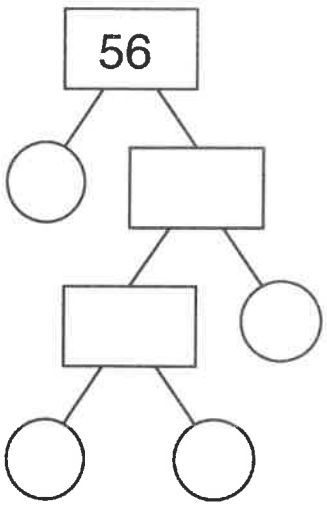
Prime Factors
_ x _ x _ x _ x _ = 108

5)



Prime Factors
_ x _ x _ x _ = 60

6)



Prime Factors
_ x _ x _ x _ = 56

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Reducing Fractions

1) $\frac{8}{10} =$ ____

2) $\frac{8}{16} =$ ____

3) $\frac{24}{48} =$ ____

4) $\frac{8}{12} =$ ____

5) $\frac{27}{72} =$ ____

6) $\frac{12}{40} =$ ____

7) $\frac{4}{8} =$ ____

8) $\frac{6}{9} =$ ____

9) $\frac{54}{81} =$ ____

10) $\frac{40}{48} =$ ____

11) $\frac{14}{18} =$ ____

12) $\frac{24}{88} =$ ____

13) $\frac{9}{12} =$ ____

14) $\frac{16}{24} =$ ____

15) $\frac{7}{84} =$ ____

16) $\frac{60}{66} =$ ____

17) $\frac{8}{16} =$ ____

18) $\frac{6}{16} =$ ____

19) $\frac{18}{36} =$ ____

20) $\frac{18}{54} =$ ____

21) $\frac{32}{40} =$ ____

22) $\frac{15}{60} =$ ____

23) $\frac{72}{81} =$ ____

24) $\frac{42}{49} =$ ____

25) $\frac{8}{64} =$ ____

26) $\frac{4}{8} =$ ____

27) $\frac{24}{56} =$ ____

28) $\frac{15}{30} =$ ____

29) $\frac{20}{50} =$ ____

30) $\frac{27}{63} =$ ____

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Equivalent Fractions

1) $\frac{8}{34} = \frac{\quad}{68}$

2) $\frac{\quad}{81} = \frac{4}{27}$

3) $\frac{19}{20} = \frac{\quad}{60}$

4) $\frac{50}{190} = \frac{10}{\quad}$

5) $\frac{\quad}{90} = \frac{1}{18}$

6) $\frac{\quad}{175} = \frac{9}{35}$

7) $\frac{46}{\quad} = \frac{\quad}{24}$

8) $\frac{7}{25} = \frac{\quad}{150}$

9) $\frac{9}{\quad} = \frac{54}{114}$

10) $\frac{15}{17} = \frac{90}{\quad}$

11) $\frac{\quad}{48} = \frac{10}{12}$

12) $\frac{\quad}{78} = \frac{21}{26}$

13) $\frac{72}{\quad} = \frac{12}{22}$

14) $\frac{18}{54} = \frac{\quad}{27}$

15) $\frac{7}{17} = \frac{\quad}{34}$

16) $\frac{\quad}{198} = \frac{28}{33}$

17) $\frac{13}{31} = \frac{\quad}{155}$

18) $\frac{\quad}{42} = \frac{12}{21}$

19) $\frac{6}{78} = \frac{3}{\quad}$

20) $\frac{4}{54} = \frac{2}{\quad}$

21) $\frac{28}{46} = \frac{\quad}{23}$

22) $\frac{1}{\quad} = \frac{4}{76}$

23) $\frac{24}{\quad} = \frac{8}{22}$

24) $\frac{21}{27} = \frac{\quad}{81}$

25) $\frac{16}{40} = \frac{\quad}{20}$

26) $\frac{6}{\quad} = \frac{36}{132}$

27) $\frac{18}{156} = \frac{3}{\quad}$

28) $\frac{36}{84} = \frac{9}{\quad}$

29) $\frac{9}{\quad} = \frac{3}{15}$

30) $\frac{\quad}{135} = \frac{25}{27}$

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Convert Between Fractions and Decimals Numbers.

1) $\frac{1}{4}$ =

2) $\frac{4}{8}$ =

3) $\frac{3}{6}$ =

4) $\frac{3}{12}$ =

5) $\frac{5}{6}$ =

6) $\frac{9}{10}$ =

7) $\frac{2}{3}$ =

8) $\frac{3}{4}$ =

9) $\frac{1}{3}$ =

10) $\frac{4}{12}$ =

11) 0.4 =

12) 0.875 =

13) 0.6 =

14) 0.2 =

15) 0.6 =

16) 0.833 =

17) 0.125 =

18) 0.6 =

19) 0.333 =

20) 0.083 =

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Converting Improper Fractions to Mixed Numbers

1) $\frac{33}{7}$ = ____ 2) $\frac{61}{9}$ = ____ 3) $\frac{34}{5}$ = ____

4) $\frac{10}{3}$ = ____ 5) $\frac{11}{2}$ = ____ 6) $\frac{31}{6}$ = ____

7) $\frac{47}{8}$ = ____ 8) $\frac{25}{7}$ = ____ 9) $\frac{30}{12}$ = ____

10) $\frac{41}{8}$ = ____ 11) $\frac{39}{10}$ = ____ 12) $\frac{26}{8}$ = ____

13) $\frac{21}{10}$ = ____ 14) $\frac{53}{10}$ = ____ 15) $\frac{23}{9}$ = ____

Converting Mixed Numbers to Improper Fractions

1) $4\frac{2}{3}$ = ____ 2) $5\frac{1}{2}$ = ____ 3) $7\frac{5}{6}$ = ____

4) $8\frac{2}{5}$ = ____ 5) $5\frac{1}{2}$ = ____ 6) $5\frac{1}{3}$ = ____

7) $4\frac{1}{3}$ = ____ 8) $4\frac{5}{9}$ = ____ 9) $5\frac{3}{4}$ = ____

10) $6\frac{2}{5}$ = ____ 11) $4\frac{2}{7}$ = ____ 12) $7\frac{2}{3}$ = ____

13) $9\frac{1}{4}$ = ____ 14) $4\frac{5}{11}$ = ____ 15) $4\frac{2}{11}$ = ____

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Write the Correct Comparison Symbol (>, < or =) in Each Box

1) $\frac{1}{6}$ ☐ 0.292

2) $\frac{1}{2}$ ☐ 0.475

3) $\frac{1}{4}$ ☐ 0.25

4) $\frac{1}{4}$ ☐ 0.1

5) $\frac{8}{9}$ ☐ 0.889

6) $\frac{1}{7}$ ☐ 0.143

7) $\frac{1}{5}$ ☐ 0.2

8) $\frac{1}{10}$ ☐ 0.05

9) $\frac{1}{2}$ ☐ 0.525

10) $\frac{1}{8}$ ☐ 0.2

11) $\frac{1}{11}$ ☐ 0.191

12) $\frac{5}{8}$ ☐ 0.625

13) $\frac{1}{3}$ ☐ 0.258

14) $\frac{3}{7}$ ☐ 0.429

15) $\frac{7}{9}$ ☐ 0.903

16) $\frac{4}{12}$ ☐ 0.208

17) $\frac{1}{3}$ ☐ 0.483

18) $\frac{7}{11}$ ☐ 0.536

19) $\frac{4}{5}$ ☐ 0.85

20) $\frac{1}{6}$ ☐ 0.042

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Find the Greatest Common Factor for each number pair.

1) 20 , 4 _____

2) 4 , 40 _____

3) 24 , 2 _____

4) 3 , 15 _____

5) 120, 6 _____

6) 10 , 2 _____

7) 40 , 3 _____

8) 6 ,120 _____

9) 6 , 2 _____

10) 15 , 2 _____

11) 5 , 20 _____

12) 30 , 10 _____

13) 5 , 4 _____

14) 3 , 60 _____

15) 6 , 24 _____

16) 120, 24 _____

17) 30 , 60 _____

18) 60 , 30 _____

19) 30 , 12 _____

20) 15 , 6 _____

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Find the Least Common Multiple for each number pair.

1) 12 , 10 _____

2) 8 , 24 _____

3) 24 , 40 _____

4) 20 , 40 _____

5) 3 , 4 _____

6) 12 , 5 _____

7) 30 , 4 _____

8) 24 , 6 _____

9) 8 , 2 _____

10) 8 , 40 _____

11) 60 ,120 _____

12) 60 , 2 _____

13) 3 , 40 _____

14) 24 , 12 _____

15) 3 , 20 _____

16) 6 , 8 _____

17) 6 , 4 _____

18) 3 , 4 _____

19) 15 , 12 _____

20) 40 , 20 _____

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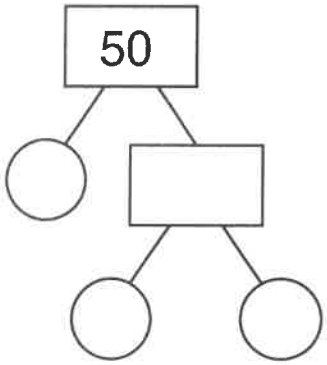
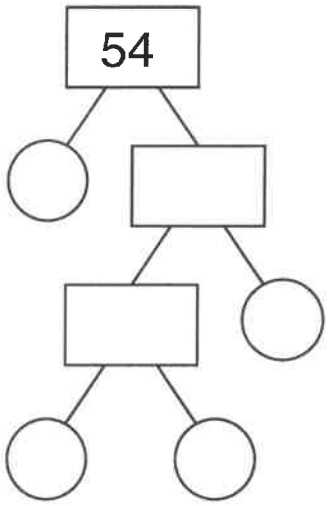
Find the Prime Factors of the Numbers

1)



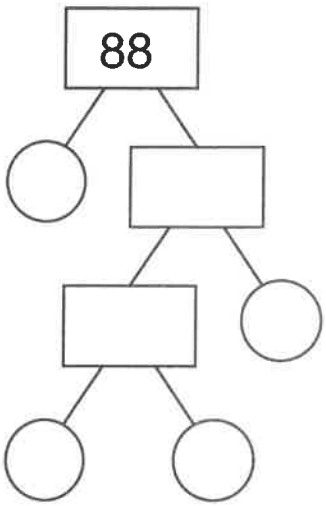
Prime Factors
_ x _ x _ = 50

2)



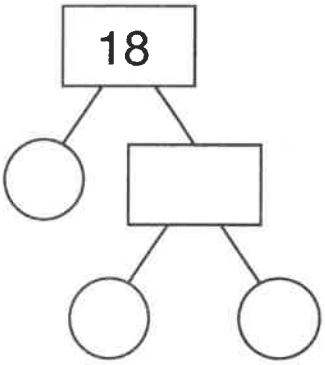
Prime Factors
_ x _ x _ x _ = 54

3)



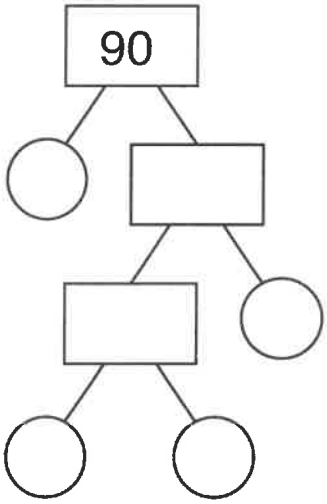
Prime Factors
_ x _ x _ x _ = 88

4)



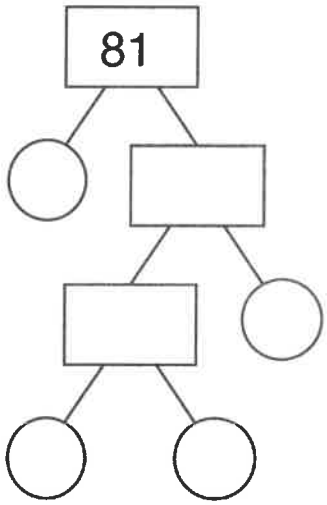
Prime Factors
_ x _ x _ = 18

5)



Prime Factors
_ x _ x _ x _ = 90

6)



Prime Factors
_ x _ x _ x _ = 81

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Find the Missing Factor

1) n x 77 = 5159 n = _____

2) 95 x n = 9025 n = _____

3) n x 75 = 3000 n = _____

4) n x 56 = 3472 n = _____

5) 32 x n = 1600 n = _____

6) 74 x n = 3848 n = _____

7) 41 x n = 1189 n = _____

8) n x 28 = 420 n = _____

9) 70 x n = 6720 n = _____

10) 67 x n = 1139 n = _____

11) 81 x n = 4536 n = _____

12) n x 23 = 345 n = _____

13) n x 89 = 8455 n = _____

14) 33 x n = 2211 n = _____

15) n x 38 = 2508 n = _____

16) n x 44 = 1012 n = _____

17) n x 15 = 405 n = _____

18) 99 x n = 3366 n = _____

19) n x 86 = 4128 n = _____

20) n x 74 = 2072 n = _____