math Antics Worksheets

Name: _____

Date: _____

Simplifying Fractions

F-SIM 1

Instructions: Simplify these fractions using the procedure you learned in the video. Cancel common factors and remultiply any remaining factors to get your final answer.

1. $\frac{12}{14} = \frac{2 \times 2 \times 3}{2 \times 7} = \frac{6}{7}$
2. $\frac{5}{10} = \_\_\_\_\_ =$
3. $\frac{6}{9} = \_\_\_\_\_ =$
4. $\frac{9}{12} = \_\_\_\_\_ =$
5. $\frac{7}{21} = \_\_\_\_\_ =$
6. $\frac{14}{16} = \_\_\_\_\_ =$
7. $\frac{7}{14} = \_\_\_\_\_ =$
8. $\frac{15}{40} = \_\_\_\_\_ =$
9. $\frac{5}{20} = \_\_\_\_\_ =$
10. $\frac{22}{44} = \_\_\_\_\_ =$
11. $\frac{8}{12} = \_\_\_\_\_ =$
12. $\frac{20}{24} = \_\_\_\_\_ =$
13. $\frac{10}{15} = \_\_\_\_\_ =$
14. $\frac{25}{30} = \_\_\_\_\_ =$
15. $\frac{18}{24} = \_\_\_\_\_ =$
16. $\frac{16}{36} = \_\_\_\_\_ =$
17. $\frac{10}{25} = \_\_\_\_\_ =$
18. $\frac{35}{50} = \_\_\_\_\_ =$

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Simplifying Fractions - Set 2

F-SIM 2

Instructions: Simplify these fractions using the procedure you learned in the video. Cancel any common factors and remultiply remaining factors to get your final answer.

1. $\frac{15}{20} = \frac{3 \times \cancel{5}}{2 \times 2 \times \cancel{5}} = \frac{3}{4}$
2. $\frac{16}{30} = \frac{\quad}{\quad} =$
3. $\frac{12}{18} = \frac{\quad}{\quad} =$
4. $\frac{15}{45} = \frac{\quad}{\quad} =$
5. $\frac{20}{25} = \frac{\quad}{\quad} =$
6. $\frac{27}{39} = \frac{\quad}{\quad} =$
7. $\frac{14}{21} = \frac{\quad}{\quad} =$
8. $\frac{48}{72} = \frac{\quad}{\quad} =$
9. $\frac{20}{32} = \frac{\quad}{\quad} =$
10. $\frac{32}{40} = \frac{\quad}{\quad} =$
11. $\frac{18}{36} = \frac{\quad}{\quad} =$
12. $\frac{45}{125} = \frac{\quad}{\quad} =$
13. $\frac{42}{63} = \frac{\quad}{\quad} =$
14. $\frac{63}{105} = \frac{\quad}{\quad} =$
15. $\frac{60}{75} = \frac{\quad}{\quad} =$
16. $\frac{42}{140} = \frac{\quad}{\quad} =$
17. $\frac{36}{84} = \frac{\quad}{\quad} =$
18. $\frac{33}{121} = \frac{\quad}{\quad} =$

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Simpler Simplifying

F-SIM 3

Instructions: Simplify these fractions using the procedure you learned in the video. Look for **composite** common factors like 4, 6, 8 or 10 that will save you some steps.

1. $\frac{10}{20} = \frac{1 \times 10}{2 \times 10} = \frac{1}{2}$
2. $\frac{12}{16} = \_\_\_\_ =$
3. $\frac{6}{12} = \_\_\_\_ =$
4. $\frac{10}{60} = \_\_\_\_ =$
5. $\frac{30}{40} = \_\_\_\_ =$
6. $\frac{24}{40} = \_\_\_\_ =$
7. $\frac{16}{20} = \_\_\_\_ =$
8. $\frac{32}{56} = \_\_\_\_ =$
9. $\frac{8}{12} = \_\_\_\_ =$
10. $\frac{30}{80} = \_\_\_\_ =$
11. $\frac{40}{64} = \_\_\_\_ =$
12. $\frac{18}{30} = \_\_\_\_ =$
13. $\frac{60}{70} = \_\_\_\_ =$
14. $\frac{24}{36} = \_\_\_\_ =$
15. $\frac{30}{36} = \_\_\_\_ =$
16. $\frac{40}{60} = \_\_\_\_ =$
17. $\frac{18}{24} = \_\_\_\_ =$
18. $\frac{64}{72} = \_\_\_\_ =$

math Antics Worksheets

Name: _____

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Could it be Simpler?

F-SIM 4

Instructions: Tell whether the fraction could be simplified. Check '**yes**' if you think it could be simplified. Check '**no**' if you think the fraction is already as simple as it can be.

Examples

$\frac{1}{2}$ ☐ yes ☒ no — already as simple as it can be

$\frac{2}{4}$ ☒ yes ☐ no — this can be simplified

1	$\frac{2}{3}$	☐ yes ☐ no	2	$\frac{8}{20}$	☐ yes ☐ no	3	$\frac{5}{10}$	☐ yes ☐ no
4	$\frac{3}{4}$	☐ yes ☐ no	5	$\frac{5}{25}$	☐ yes ☐ no	6	$\frac{7}{9}$	☐ yes ☐ no
7	$\frac{14}{44}$	☐ yes ☐ no	8	$\frac{15}{21}$	☐ yes ☐ no	9	$\frac{1}{16}$	☐ yes ☐ no
10	$\frac{6}{7}$	☐ yes ☐ no	11	$\frac{33}{44}$	☐ yes ☐ no	12	$\frac{6}{15}$	☐ yes ☐ no
13	$\frac{9}{27}$	☐ yes ☐ no	14	$\frac{11}{13}$	☐ yes ☐ no	15	$\frac{3}{8}$	☐ yes ☐ no
16	$\frac{4}{18}$	☐ yes ☐ no	17	$\frac{9}{16}$	☐ yes ☐ no	18	$\frac{8}{64}$	☐ yes ☐ no
19	$\frac{7}{15}$	☐ yes ☐ no	20	$\frac{23}{55}$	☐ yes ☐ no	21	$\frac{3}{30}$	☐ yes ☐ no
22	$\frac{12}{44}$	☐ yes ☐ no	23	$\frac{9}{81}$	☐ yes ☐ no	24	$\frac{13}{26}$	☐ yes ☐ no

math Antics
Exercises

Name:

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Simplifying Fractions

1 Simplify this fraction.

$\frac{6}{30}$

2 Simplify this fraction.

$\frac{15}{20}$

3 Simplify this fraction.

$\frac{8}{48}$

4 Simplify this fraction.

$\frac{9}{36}$

5 Simplify this fraction.

$\frac{49}{84}$

6 Simplify this fraction.

$\frac{54}{27}$

7 Simplify this fraction.

$\frac{24}{36}$

8 Simplify this fraction.

$\frac{50}{250}$

math Antics Worksheets

Name: _____

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Simplifying Fractions

F-SIM 1

Instructions: Simplify these fractions using the procedure you learned in the video. Cancel common factors and remultiply any remaining factors to get your final answer.

1. $\frac{12}{14} = \frac{2 \times 2 \times 3}{2 \times 7} = \frac{6}{7}$
2. $\frac{5}{10} = \frac{5 \times 1}{5 \times 2} = \frac{1}{2}$
3. $\frac{6}{9} = \frac{3 \times 2}{3 \times 3} = \frac{2}{3}$
4. $\frac{9}{12} = \frac{3 \times 3}{2 \times 2 \times 3} = \frac{3}{4}$
5. $\frac{7}{21} = \frac{1 \times 7}{3 \times 7} = \frac{1}{3}$
6. $\frac{14}{16} = \frac{2 \times 7}{2 \times 2 \times 2 \times 2} = \frac{7}{8}$
7. $\frac{7}{14} = \frac{1 \times 7}{2 \times 7} = \frac{1}{2}$
8. $\frac{15}{40} = \frac{3 \times 5}{2 \times 2 \times 2 \times 5} = \frac{3}{8}$
9. $\frac{5}{20} = \frac{1 \times 5}{2 \times 2 \times 5} = \frac{1}{4}$
10. $\frac{22}{44} = \frac{2 \times 11}{2 \times 2 \times 11} = \frac{1}{2}$
11. $\frac{8}{12} = \frac{2 \times 2 \times 2}{2 \times 2 \times 3} = \frac{2}{3}$
12. $\frac{20}{24} = \frac{2 \times 2 \times 5}{2 \times 2 \times 2 \times 3} = \frac{5}{6}$
13. $\frac{10}{15} = \frac{2 \times 5}{3 \times 5} = \frac{2}{3}$
14. $\frac{25}{30} = \frac{5 \times 5}{5 \times 2 \times 3} = \frac{5}{6}$
15. $\frac{18}{24} = \frac{2 \times 3 \times 3}{2 \times 2 \times 2 \times 3} = \frac{3}{4}$
16. $\frac{16}{36} = \frac{2 \times 2 \times 2 \times 2}{2 \times 3 \times 2 \times 3} = \frac{4}{9}$
17. $\frac{10}{25} = \frac{2 \times 5}{5 \times 5} = \frac{2}{5}$
18. $\frac{35}{50} = \frac{5 \times 7}{2 \times 5 \times 5} = \frac{7}{10}$

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Name: _____

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Simplifying Fractions - Set 2

F-SIM 2

Instructions: Simplify these fractions using the procedure you learned in the video. Cancel any common factors and remultiply remaining factors to get your final answer.

1. $\frac{15}{20} = \frac{3 \times 5}{2 \times 2 \times 5} = \frac{3}{4}$
2. $\frac{16}{30} = \frac{2 \times 2 \times 2 \times 2}{2 \times 3 \times 5} = \frac{8}{15}$
3. $\frac{12}{18} = \frac{2 \times 2 \times 3}{2 \times 3 \times 3} = \frac{2}{3}$
4. $\frac{15}{45} = \frac{3 \times 5}{3 \times 3 \times 5} = \frac{1}{3}$
5. $\frac{20}{25} = \frac{2 \times 2 \times 5}{5 \times 5} = \frac{4}{5}$
6. $\frac{27}{39} = \frac{3 \times 3 \times 3}{3 \times 13} = \frac{9}{13}$
7. $\frac{14}{21} = \frac{2 \times 7}{3 \times 7} = \frac{2}{3}$
8. $\frac{48}{72} = \frac{2 \times 2 \times 2 \times 2 \times 3}{2 \times 2 \times 2 \times 3 \times 3} = \frac{2}{3}$
9. $\frac{20}{32} = \frac{2 \times 2 \times 5}{2 \times 2 \times 2 \times 2 \times 2} = \frac{5}{8}$
10. $\frac{32}{40} = \frac{2 \times 2 \times 2 \times 2 \times 2}{2 \times 2 \times 2 \times 5} = \frac{4}{5}$
11. $\frac{18}{36} = \frac{2 \times 3 \times 3}{2 \times 3 \times 2 \times 3} = \frac{1}{2}$
12. $\frac{45}{125} = \frac{3 \times 3 \times 5}{5 \times 5 \times 5} = \frac{9}{25}$
13. $\frac{42}{63} = \frac{2 \times 3 \times 7}{3 \times 3 \times 7} = \frac{2}{3}$
14. $\frac{63}{105} = \frac{3 \times 3 \times 7}{5 \times 3 \times 7} = \frac{3}{5}$
15. $\frac{60}{75} = \frac{2 \times 3 \times 2 \times 5}{3 \times 5 \times 5} = \frac{4}{5}$
16. $\frac{42}{140} = \frac{2 \times 3 \times 7}{2 \times 2 \times 5 \times 7} = \frac{3}{10}$
17. $\frac{36}{84} = \frac{2 \times 2 \times 3 \times 3}{2 \times 2 \times 3 \times 7} = \frac{3}{7}$
18. $\frac{33}{121} = \frac{3 \times 11}{11 \times 11} = \frac{3}{11}$

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Simpler Simplifying

F-SIM 3

Instructions: Simplify these fractions using the procedure you learned in the video. Look for **composite** common factors like 4, 6, 8 or 10 that will save you some steps.

1. $\frac{10}{20} = \frac{1 \times 10}{2 \times 10} = \frac{1}{2}$
2. $\frac{12}{16} = \frac{3 \times 4}{4 \times 4} = \frac{3}{4}$
3. $\frac{6}{12} = \frac{6 \times 1}{6 \times 2} = \frac{1}{2}$
4. $\frac{10}{60} = \frac{1 \times 10}{6 \times 10} = \frac{1}{6}$
5. $\frac{30}{40} = \frac{3 \times 10}{4 \times 10} = \frac{3}{4}$
6. $\frac{24}{40} = \frac{3 \times 8}{5 \times 8} = \frac{3}{5}$
7. $\frac{16}{20} = \frac{4 \times 4}{5 \times 4} = \frac{4}{5}$
8. $\frac{32}{56} = \frac{4 \times 8}{7 \times 8} = \frac{4}{7}$
9. $\frac{8}{12} = \frac{2 \times 4}{3 \times 4} = \frac{2}{3}$
10. $\frac{30}{80} = \frac{3 \times 10}{8 \times 10} = \frac{3}{8}$
11. $\frac{40}{64} = \frac{5 \times 8}{8 \times 8} = \frac{5}{8}$
12. $\frac{18}{30} = \frac{3 \times 6}{5 \times 6} = \frac{3}{5}$
13. $\frac{60}{70} = \frac{6 \times 10}{7 \times 10} = \frac{6}{7}$
14. $\frac{24}{36} = \frac{2 \times 2 \times 6}{2 \times 3 \times 6} = \frac{2}{3}$
15. $\frac{30}{36} = \frac{5 \times 6}{6 \times 6} = \frac{5}{6}$
16. $\frac{40}{60} = \frac{2 \times 2 \times 10}{2 \times 3 \times 10} = \frac{2}{3}$
17. $\frac{18}{24} = \frac{3 \times 6}{4 \times 6} = \frac{3}{4}$
18. $\frac{64}{72} = \frac{8 \times 8}{9 \times 8} = \frac{8}{9}$

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Date: _____

Could it be Simpler?

F-SIM 4

Instructions: Tell whether the fraction could be simplified. Check '**yes**' if you think it could be simplified. Check '**no**' if you think the fraction is already as simple as it can be.

Examples

$\frac{1}{2}$ ☐ yes ☒ no — already as simple as it can be

$\frac{2}{4}$ ☒ yes ☐ no — this can be simplified

1	$\frac{2}{3}$	☐ yes ☒ no	2	$\frac{8}{20}$	☒ yes ☐ no	3	$\frac{5}{10}$	☒ yes ☐ no
4	$\frac{3}{4}$	☐ yes ☒ no	5	$\frac{5}{25}$	☒ yes ☐ no	6	$\frac{7}{9}$	☐ yes ☒ no
7	$\frac{14}{44}$	☒ yes ☐ no	8	$\frac{15}{21}$	☒ yes ☐ no	9	$\frac{1}{16}$	☐ yes ☒ no
10	$\frac{6}{7}$	☐ yes ☒ no	11	$\frac{33}{44}$	☒ yes ☐ no	12	$\frac{6}{15}$	☒ yes ☐ no
13	$\frac{9}{27}$	☒ yes ☐ no	14	$\frac{11}{13}$	☐ yes ☒ no	15	$\frac{3}{8}$	☐ yes ☒ no
16	$\frac{4}{18}$	☒ yes ☐ no	17	$\frac{9}{16}$	☐ yes ☒ no	18	$\frac{8}{64}$	☒ yes ☐ no
19	$\frac{7}{15}$	☐ yes ☒ no	20	$\frac{23}{55}$	☐ yes ☒ no	21	$\frac{3}{30}$	☒ yes ☐ no
22	$\frac{12}{44}$	☒ yes ☐ no	23	$\frac{9}{81}$	☒ yes ☐ no	24	$\frac{13}{26}$	☒ yes ☐ no

math Antics
Exercises

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Simplifying Fractions

1 Simplify this fraction.

$$\frac{6}{30} = \frac{\cancel{2} \times \cancel{3}}{\cancel{2} \times \cancel{3} \times 5} = \frac{1}{5}$$

Or, using the GCF

$$= \frac{\cancel{6}}{5 \times \cancel{6}} = \frac{1}{5}$$

2 Simplify this fraction.

$$\frac{15}{20} = \frac{3 \times \cancel{5}}{2 \times 2 \times \cancel{5}} = \frac{3}{4}$$

3 Simplify this fraction.

$$\frac{8}{48} = \frac{\cancel{2} \times \cancel{2} \times \cancel{2}}{\cancel{2} \times \cancel{2} \times \cancel{2} \times 2 \times 3} = \frac{1}{6}$$

Or, using the GCF

$$= \frac{\cancel{8}}{6 \times \cancel{8}} = \frac{1}{6}$$

4 Simplify this fraction.

$$\frac{9}{36} = \frac{\cancel{3} \times \cancel{3}}{2 \times \cancel{3} \times 2 \times \cancel{3}} = \frac{1}{4}$$

Or, using the GCF

$$= \frac{\cancel{9}}{4 \times \cancel{9}} = \frac{1}{4}$$

5 Simplify this fraction.

$$\frac{49}{84} = \frac{7 \times \cancel{7}}{2 \times 2 \times 3 \times \cancel{7}} = \frac{7}{12}$$

Or, using the GCF

$$= \frac{\cancel{7} \times 7}{\cancel{7} \times 12} = \frac{7}{12}$$

6 Simplify this fraction.

$$\frac{54}{27} = \frac{\cancel{3} \times \cancel{3} \times \cancel{3} \times 2}{\cancel{3} \times \cancel{3} \times \cancel{3}} = \frac{2}{1} = 2$$

Or, using the GCF

$$= \frac{2 \times \cancel{27}}{\cancel{27}} = \frac{2}{1} = 2$$

7 Simplify this fraction.

$$\frac{24}{36} = \frac{\cancel{2} \times \cancel{2} \times 2 \times \cancel{3}}{\cancel{2} \times \cancel{2} \times 3 \times \cancel{3}} = \frac{2}{3}$$

Or, using the GCF

$$= \frac{2 \times \cancel{12}}{3 \times \cancel{12}} = \frac{2}{3}$$

8 Simplify this fraction.

$$\frac{50}{250} = \frac{\cancel{2} \times \cancel{5} \times \cancel{5}}{\cancel{2} \times \cancel{5} \times \cancel{5} \times 5} = \frac{1}{5}$$

Or, using the GCF

$$= \frac{\cancel{50}}{5 \times \cancel{50}} = \frac{1}{5}$$

See Video for step-by-step solutions to each problem.