



Factor each expression completely.

1)  $\frac{6}{48}b - \frac{12}{30} =$  \_\_\_\_\_

2)  $\frac{6}{25}c - \frac{8}{20} =$  \_\_\_\_\_

3)  $\frac{12}{48}d - \frac{20}{16} =$  \_\_\_\_\_

4)  $\frac{6}{35}e - \frac{2}{28} =$  \_\_\_\_\_

5)  $-\frac{4}{36}f - \frac{12}{54} =$  \_\_\_\_\_

6)  $-\frac{12}{40}g - \frac{12}{30} =$  \_\_\_\_\_

7)  $-\frac{3}{15}h - \frac{6}{25} =$  \_\_\_\_\_

8)  $\frac{8}{40}i - \frac{12}{32} =$  \_\_\_\_\_

9)  $-\frac{3}{12}j + \frac{3}{16} =$  \_\_\_\_\_

10)  $-\frac{3}{16}k - \frac{3}{16} =$  \_\_\_\_\_

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

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6. \_\_\_\_\_

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8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



Factor each expression completely.

$$1) \frac{6}{48}b - \frac{12}{30} = \frac{6/6(1/8b - 2/5)}{}$$

$$2) \frac{6}{25}c - \frac{8}{20} = \frac{2/5(3/5c - 4/4)}{}$$

$$3) \frac{12}{48}d - \frac{20}{16} = \frac{4/16(3/3d - 5/1)}{}$$

$$4) \frac{6}{35}e - \frac{2}{28} = \frac{2/7(3/5e - 1/4)}{}$$

$$5) -\frac{4}{36}f - \frac{12}{54} = \frac{-4/18(1/2f + 3/3)}{}$$

$$6) -\frac{12}{40}g - \frac{12}{30} = \frac{-12/10(1/4g + 1/3)}{}$$

$$7) -\frac{3}{15}h - \frac{6}{25} = \frac{-3/5(1/3h + 2/5)}{}$$

$$8) \frac{8}{40}i - \frac{12}{32} = \frac{4/8(2/5i - 3/4)}{}$$

$$9) -\frac{3}{12}j + \frac{3}{16} = \frac{-3/4(1/3j - 1/4)}{}$$

$$10) -\frac{3}{16}k - \frac{3}{16} = \frac{-3/16(1/1k + 1/1)}{}$$

**Answers**

1.  $\frac{6/6(1/8b - 2/5)}{}$

2.  $\frac{2/5(3/5c - 4/4)}{}$

3.  $\frac{4/16(3/3d - 5/1)}{}$

4.  $\frac{2/7(3/5e - 1/4)}{}$

5.  $\frac{-4/18(1/2f + 3/3)}{}$

6.  $\frac{-12/10(1/4g + 1/3)}{}$

7.  $\frac{-3/5(1/3h + 2/5)}{}$

8.  $\frac{4/8(2/5i - 3/4)}{}$

9.  $\frac{-3/4(1/3j - 1/4)}{}$

10.  $\frac{-3/16(1/1k + 1/1)}{}$



Factor each expression completely.

1)  $\frac{12}{45}b - \frac{8}{15} =$  \_\_\_\_\_

2)  $\frac{4}{24}c - \frac{4}{64} =$  \_\_\_\_\_

3)  $\frac{4}{24}d + \frac{2}{40} =$  \_\_\_\_\_

4)  $-\frac{3}{12}e - \frac{3}{24} =$  \_\_\_\_\_

5)  $-\frac{2}{30}f - \frac{8}{54} =$  \_\_\_\_\_

6)  $-\frac{16}{64}g - \frac{4}{32} =$  \_\_\_\_\_

7)  $\frac{6}{56}h - \frac{12}{14} =$  \_\_\_\_\_

8)  $\frac{10}{56}i - \frac{14}{21} =$  \_\_\_\_\_

9)  $\frac{6}{28}j + \frac{3}{56} =$  \_\_\_\_\_

10)  $-\frac{6}{35}k - \frac{6}{21} =$  \_\_\_\_\_

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



Factor each expression completely.

$$1) \frac{12}{45}b - \frac{8}{15} = \frac{4}{15}(\frac{3}{3}b - \frac{2}{1})$$

$$2) \frac{4}{24}c - \frac{4}{64} = \frac{4}{8}(\frac{1}{3}c - \frac{1}{8})$$

$$3) \frac{4}{24}d + \frac{2}{40} = \frac{2}{8}(\frac{2}{3}d + \frac{1}{5})$$

$$4) -\frac{3}{12}e - \frac{3}{24} = -\frac{3}{12}(\frac{1}{1}e + \frac{1}{2})$$

$$5) -\frac{2}{30}f - \frac{8}{54} = -\frac{2}{6}(\frac{1}{5}f + \frac{4}{9})$$

$$6) -\frac{16}{64}g - \frac{4}{32} = -\frac{4}{32}(\frac{4}{2}g + \frac{1}{1})$$

$$7) \frac{6}{56}h - \frac{12}{14} = \frac{6}{14}(\frac{1}{4}h - \frac{2}{1})$$

$$8) \frac{10}{56}i - \frac{14}{21} = \frac{2}{7}(\frac{5}{8}i - \frac{7}{3})$$

$$9) \frac{6}{28}j + \frac{3}{56} = \frac{3}{28}(\frac{2}{1}j + \frac{1}{2})$$

$$10) -\frac{6}{35}k - \frac{6}{21} = -\frac{6}{7}(\frac{1}{5}k + \frac{1}{3})$$

**Answers**

1.  $\frac{4}{15}(\frac{3}{3}b - \frac{2}{1})$

2.  $\frac{4}{8}(\frac{1}{3}c - \frac{1}{8})$

3.  $\frac{2}{8}(\frac{2}{3}d + \frac{1}{5})$

4.  $-\frac{3}{12}(\frac{1}{1}e + \frac{1}{2})$

5.  $-\frac{2}{6}(\frac{1}{5}f + \frac{4}{9})$

6.  $-\frac{4}{32}(\frac{4}{2}g + \frac{1}{1})$

7.  $\frac{6}{14}(\frac{1}{4}h - \frac{2}{1})$

8.  $\frac{2}{7}(\frac{5}{8}i - \frac{7}{3})$

9.  $\frac{3}{28}(\frac{2}{1}j + \frac{1}{2})$

10.  $-\frac{6}{7}(\frac{1}{5}k + \frac{1}{3})$



Factor each expression completely.

1)  $\frac{20}{40}b - \frac{16}{20} =$  \_\_\_\_\_

2)  $-\frac{8}{15}c - \frac{4}{15} =$  \_\_\_\_\_

3)  $\frac{12}{48}d + \frac{9}{16} =$  \_\_\_\_\_

4)  $-\frac{12}{40}e - \frac{14}{10} =$  \_\_\_\_\_

5)  $-\frac{15}{56}f + \frac{15}{56} =$  \_\_\_\_\_

6)  $\frac{6}{56}g + \frac{2}{40} =$  \_\_\_\_\_

7)  $\frac{21}{54}h - \frac{3}{18} =$  \_\_\_\_\_

8)  $\frac{4}{40}i + \frac{28}{35} =$  \_\_\_\_\_

9)  $-\frac{9}{72}j - \frac{18}{72} =$  \_\_\_\_\_

10)  $\frac{16}{36}k + \frac{6}{12} =$  \_\_\_\_\_

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



Factor each expression completely.

$$1) \frac{20}{40}b - \frac{16}{20} = \frac{4}{20}(\frac{5}{2}b - \frac{4}{1})$$

$$2) -\frac{8}{15}c - \frac{4}{15} = \frac{-4}{15}(\frac{2}{1}c + \frac{1}{1})$$

$$3) \frac{12}{48}d + \frac{9}{16} = \frac{3}{16}(\frac{4}{3}d + \frac{3}{1})$$

$$4) -\frac{12}{40}e - \frac{14}{10} = \frac{-2}{10}(\frac{6}{4}e + \frac{7}{1})$$

$$5) -\frac{15}{56}f + \frac{15}{56} = \frac{-15}{56}(\frac{1}{1}f - \frac{1}{1})$$

$$6) \frac{6}{56}g + \frac{2}{40} = \frac{2}{8}(\frac{3}{7}g + \frac{1}{5})$$

$$7) \frac{21}{54}h - \frac{3}{18} = \frac{3}{18}(\frac{7}{3}h - \frac{1}{1})$$

$$8) \frac{4}{40}i + \frac{28}{35} = \frac{4}{5}(\frac{1}{8}i + \frac{7}{7})$$

$$9) -\frac{9}{72}j - \frac{18}{72} = \frac{-9}{72}(\frac{1}{1}j + \frac{2}{1})$$

$$10) \frac{16}{36}k + \frac{6}{12} = \frac{2}{12}(\frac{8}{3}k + \frac{3}{1})$$

**Answers**

1.  $\frac{4}{20}(\frac{5}{2}b - \frac{4}{1})$

2.  $\frac{-4}{15}(\frac{2}{1}c + \frac{1}{1})$

3.  $\frac{3}{16}(\frac{4}{3}d + \frac{3}{1})$

4.  $\frac{-2}{10}(\frac{6}{4}e + \frac{7}{1})$

5.  $\frac{-15}{56}(\frac{1}{1}f - \frac{1}{1})$

6.  $\frac{2}{8}(\frac{3}{7}g + \frac{1}{5})$

7.  $\frac{3}{18}(\frac{7}{3}h - \frac{1}{1})$

8.  $\frac{4}{5}(\frac{1}{8}i + \frac{7}{7})$

9.  $\frac{-9}{72}(\frac{1}{1}j + \frac{2}{1})$

10.  $\frac{2}{12}(\frac{8}{3}k + \frac{3}{1})$



Factor each expression completely.

1)  $\frac{6}{72}b - \frac{3}{45} =$  \_\_\_\_\_

2)  $\frac{12}{72}c + \frac{10}{36} =$  \_\_\_\_\_

3)  $-\frac{2}{18}d - \frac{2}{18} =$  \_\_\_\_\_

4)  $-\frac{14}{72}e - \frac{8}{64} =$  \_\_\_\_\_

5)  $-\frac{9}{24}f - \frac{3}{48} =$  \_\_\_\_\_

6)  $\frac{2}{12}g + \frac{2}{48} =$  \_\_\_\_\_

7)  $\frac{4}{21}h + \frac{4}{56} =$  \_\_\_\_\_

8)  $-\frac{12}{54}i + \frac{15}{24} =$  \_\_\_\_\_

9)  $-\frac{4}{14}j + \frac{4}{14} =$  \_\_\_\_\_

10)  $\frac{10}{21}k + \frac{12}{12} =$  \_\_\_\_\_

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



Factor each expression completely.

$$1) \frac{6}{72}b - \frac{3}{45} = \underline{\frac{3}{9}(\frac{2}{8}b - \frac{1}{5})}$$

$$2) \frac{12}{72}c + \frac{10}{36} = \underline{\frac{2}{36}(\frac{6}{2}c + \frac{5}{1})}$$

$$3) -\frac{2}{18}d - \frac{2}{18} = \underline{-\frac{2}{18}(\frac{1}{1}d + \frac{1}{1})}$$

$$4) -\frac{14}{72}e - \frac{8}{64} = \underline{-\frac{2}{8}(\frac{7}{9}e + \frac{4}{8})}$$

$$5) -\frac{9}{24}f - \frac{3}{48} = \underline{-\frac{3}{24}(\frac{3}{1}f + \frac{1}{2})}$$

$$6) \frac{2}{12}g + \frac{2}{48} = \underline{\frac{2}{12}(\frac{1}{1}g + \frac{1}{4})}$$

$$7) \frac{4}{21}h + \frac{4}{56} = \underline{\frac{4}{7}(\frac{1}{3}h + \frac{1}{8})}$$

$$8) -\frac{12}{54}i + \frac{15}{24} = \underline{-\frac{3}{6}(\frac{4}{9}i - \frac{5}{4})}$$

$$9) -\frac{4}{14}j + \frac{4}{14} = \underline{-\frac{4}{14}(\frac{1}{1}j - \frac{1}{1})}$$

$$10) \frac{10}{21}k + \frac{12}{12} = \underline{\frac{2}{3}(\frac{5}{7}k + \frac{6}{4})}$$

**Answers**

1.  $\underline{\frac{3}{9}(\frac{2}{8}b - \frac{1}{5})}$

2.  $\underline{\frac{2}{36}(\frac{6}{2}c + \frac{5}{1})}$

3.  $\underline{-\frac{2}{18}(\frac{1}{1}d + \frac{1}{1})}$

4.  $\underline{-\frac{2}{8}(\frac{7}{9}e + \frac{4}{8})}$

5.  $\underline{-\frac{3}{24}(\frac{3}{1}f + \frac{1}{2})}$

6.  $\underline{\frac{2}{12}(\frac{1}{1}g + \frac{1}{4})}$

7.  $\underline{\frac{4}{7}(\frac{1}{3}h + \frac{1}{8})}$

8.  $\underline{-\frac{3}{6}(\frac{4}{9}i - \frac{5}{4})}$

9.  $\underline{-\frac{4}{14}(\frac{1}{1}j - \frac{1}{1})}$

10.  $\underline{\frac{2}{3}(\frac{5}{7}k + \frac{6}{4})}$





Factor each expression completely.

1)  $-\frac{12}{63}b + \frac{8}{63} =$  \_\_\_\_\_

2)  $\frac{8}{45}c - \frac{12}{30} =$  \_\_\_\_\_

3)  $\frac{6}{42}d + \frac{6}{49} =$  \_\_\_\_\_

4)  $\frac{10}{42}e - \frac{8}{48} =$  \_\_\_\_\_

5)  $\frac{3}{8}f + \frac{3}{24} =$  \_\_\_\_\_

6)  $-\frac{12}{56}g + \frac{4}{56} =$  \_\_\_\_\_

7)  $-\frac{6}{20}h + \frac{2}{8} =$  \_\_\_\_\_

8)  $-\frac{8}{30}i + \frac{12}{42} =$  \_\_\_\_\_

9)  $\frac{2}{10}j + \frac{2}{10} =$  \_\_\_\_\_

10)  $\frac{9}{28}k + \frac{6}{35} =$  \_\_\_\_\_

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



Factor each expression completely.

$$1) -\frac{12}{63}b + \frac{8}{63} = \underline{-\frac{4}{63}(\frac{3}{1}b - \frac{2}{1})}$$

$$2) \frac{8}{45}c - \frac{12}{30} = \underline{\frac{4}{15}(\frac{2}{3}c - \frac{3}{2})}$$

$$3) \frac{6}{42}d + \frac{6}{49} = \underline{\frac{6}{7}(\frac{1}{6}d + \frac{1}{7})}$$

$$4) \frac{10}{42}e - \frac{8}{48} = \underline{\frac{2}{6}(\frac{5}{7}e - \frac{4}{8})}$$

$$5) \frac{3}{8}f + \frac{3}{24} = \underline{\frac{3}{8}(\frac{1}{1}f + \frac{1}{3})}$$

$$6) -\frac{12}{56}g + \frac{4}{56} = \underline{-\frac{4}{56}(\frac{3}{1}g - \frac{1}{1})}$$

$$7) -\frac{6}{20}h + \frac{2}{8} = \underline{-\frac{2}{4}(\frac{3}{5}h - \frac{1}{2})}$$

$$8) -\frac{8}{30}i + \frac{12}{42} = \underline{-\frac{4}{6}(\frac{2}{5}i - \frac{3}{7})}$$

$$9) \frac{2}{10}j + \frac{2}{10} = \underline{\frac{2}{10}(\frac{1}{1}j + \frac{1}{1})}$$

$$10) \frac{9}{28}k + \frac{6}{35} = \underline{\frac{3}{7}(\frac{3}{4}k + \frac{2}{5})}$$

**Answers**

1.  $\underline{-\frac{4}{63}(\frac{3}{1}b - \frac{2}{1})}$

2.  $\underline{\frac{4}{15}(\frac{2}{3}c - \frac{3}{2})}$

3.  $\underline{\frac{6}{7}(\frac{1}{6}d + \frac{1}{7})}$

4.  $\underline{\frac{2}{6}(\frac{5}{7}e - \frac{4}{8})}$

5.  $\underline{\frac{3}{8}(\frac{1}{1}f + \frac{1}{3})}$

6.  $\underline{-\frac{4}{56}(\frac{3}{1}g - \frac{1}{1})}$

7.  $\underline{-\frac{2}{4}(\frac{3}{5}h - \frac{1}{2})}$

8.  $\underline{-\frac{4}{6}(\frac{2}{5}i - \frac{3}{7})}$

9.  $\underline{\frac{2}{10}(\frac{1}{1}j + \frac{1}{1})}$

10.  $\underline{\frac{3}{7}(\frac{3}{4}k + \frac{2}{5})}$



Factor each expression completely.

1)  $\frac{3}{14}b + \frac{3}{35} =$  \_\_\_\_\_

2)  $-\frac{4}{20}c + \frac{8}{10} =$  \_\_\_\_\_

3)  $\frac{2}{25}d - \frac{8}{40} =$  \_\_\_\_\_

4)  $\frac{2}{32}e - \frac{4}{56} =$  \_\_\_\_\_

5)  $\frac{16}{27}f + \frac{16}{15} =$  \_\_\_\_\_

6)  $-\frac{4}{18}g - \frac{2}{54} =$  \_\_\_\_\_

7)  $-\frac{12}{35}h + \frac{8}{14} =$  \_\_\_\_\_

8)  $-\frac{16}{40}i - \frac{8}{56} =$  \_\_\_\_\_

9)  $\frac{6}{20}j - \frac{9}{16} =$  \_\_\_\_\_

10)  $-\frac{12}{35}k + \frac{16}{20} =$  \_\_\_\_\_

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



Factor each expression completely.

$$1) \frac{3}{14}b + \frac{3}{35} = \underline{\frac{3}{7}(\frac{1}{2}b + \frac{1}{5})}$$

$$2) -\frac{4}{20}c + \frac{8}{10} = \underline{-\frac{4}{10}(\frac{1}{2}c - \frac{2}{1})}$$

$$3) \frac{2}{25}d - \frac{8}{40} = \underline{\frac{2}{5}(\frac{1}{5}d - \frac{4}{8})}$$

$$4) \frac{2}{32}e - \frac{4}{56} = \underline{\frac{2}{8}(\frac{1}{4}e - \frac{2}{7})}$$

$$5) \frac{16}{27}f + \frac{16}{15} = \underline{\frac{16}{3}(\frac{1}{9}f + \frac{1}{5})}$$

$$6) -\frac{4}{18}g - \frac{2}{54} = \underline{-\frac{2}{18}(\frac{2}{1}g + \frac{1}{3})}$$

$$7) -\frac{12}{35}h + \frac{8}{14} = \underline{-\frac{4}{7}(\frac{3}{5}h - \frac{2}{2})}$$

$$8) -\frac{16}{40}i - \frac{8}{56} = \underline{-\frac{8}{8}(\frac{2}{5}i + \frac{1}{7})}$$

$$9) \frac{6}{20}j - \frac{9}{16} = \underline{\frac{3}{4}(\frac{2}{5}j - \frac{3}{4})}$$

$$10) -\frac{12}{35}k + \frac{16}{20} = \underline{-\frac{4}{5}(\frac{3}{7}k - \frac{4}{4})}$$

**Answers**

1.  $\underline{\frac{3}{7}(\frac{1}{2}b + \frac{1}{5})}$

2.  $\underline{-\frac{4}{10}(\frac{1}{2}c - \frac{2}{1})}$

3.  $\underline{\frac{2}{5}(\frac{1}{5}d - \frac{4}{8})}$

4.  $\underline{\frac{2}{8}(\frac{1}{4}e - \frac{2}{7})}$

5.  $\underline{\frac{16}{3}(\frac{1}{9}f + \frac{1}{5})}$

6.  $\underline{-\frac{2}{18}(\frac{2}{1}g + \frac{1}{3})}$

7.  $\underline{-\frac{4}{7}(\frac{3}{5}h - \frac{2}{2})}$

8.  $\underline{-\frac{8}{8}(\frac{2}{5}i + \frac{1}{7})}$

9.  $\underline{\frac{3}{4}(\frac{2}{5}j - \frac{3}{4})}$

10.  $\underline{-\frac{4}{5}(\frac{3}{7}k - \frac{4}{4})}$



Factor each expression completely.

1)  $-\frac{9}{25}b - \frac{3}{20} =$  \_\_\_\_\_

2)  $\frac{8}{42}c + \frac{2}{42} =$  \_\_\_\_\_

3)  $-\frac{12}{72}d + \frac{14}{18} =$  \_\_\_\_\_

4)  $-\frac{2}{45}e + \frac{14}{30} =$  \_\_\_\_\_

5)  $\frac{14}{36}f - \frac{12}{28} =$  \_\_\_\_\_

6)  $-\frac{20}{72}g - \frac{20}{64} =$  \_\_\_\_\_

7)  $\frac{2}{12}h + \frac{2}{48} =$  \_\_\_\_\_

8)  $\frac{15}{56}i + \frac{3}{32} =$  \_\_\_\_\_

9)  $\frac{6}{48}j - \frac{9}{16} =$  \_\_\_\_\_

10)  $-\frac{3}{32}k - \frac{3}{32} =$  \_\_\_\_\_

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



Factor each expression completely.

$$1) \quad -\frac{9}{25}b - \frac{3}{20} = \underline{-\frac{3}{5}\left(\frac{3}{5}b + \frac{1}{4}\right)}$$

$$2) \quad \frac{8}{42}c + \frac{2}{42} = \underline{\frac{2}{42}\left(\frac{4}{1}c + \frac{1}{1}\right)}$$

$$3) \quad -\frac{12}{72}d + \frac{14}{18} = \underline{-\frac{2}{18}\left(\frac{6}{4}d - \frac{7}{1}\right)}$$

$$4) \quad -\frac{2}{45}e + \frac{14}{30} = \underline{-\frac{2}{15}\left(\frac{1}{3}e - \frac{7}{2}\right)}$$

$$5) \quad \frac{14}{36}f - \frac{12}{28} = \underline{\frac{2}{4}\left(\frac{7}{9}f - \frac{6}{7}\right)}$$

$$6) \quad -\frac{20}{72}g - \frac{20}{64} = \underline{-\frac{20}{8}\left(\frac{1}{9}g + \frac{1}{8}\right)}$$

$$7) \quad \frac{2}{12}h + \frac{2}{48} = \underline{\frac{2}{12}\left(\frac{1}{1}h + \frac{1}{4}\right)}$$

$$8) \quad \frac{15}{56}i + \frac{3}{32} = \underline{\frac{3}{8}\left(\frac{5}{7}i + \frac{1}{4}\right)}$$

$$9) \quad \frac{6}{48}j - \frac{9}{16} = \underline{\frac{3}{16}\left(\frac{2}{3}j - \frac{3}{1}\right)}$$

$$10) \quad -\frac{3}{32}k - \frac{3}{32} = \underline{-\frac{3}{32}\left(\frac{1}{1}k + \frac{1}{1}\right)}$$

**Answers**

1.  $\underline{-\frac{3}{5}\left(\frac{3}{5}b + \frac{1}{4}\right)}$

2.  $\underline{\frac{2}{42}\left(\frac{4}{1}c + \frac{1}{1}\right)}$

3.  $\underline{-\frac{2}{18}\left(\frac{6}{4}d - \frac{7}{1}\right)}$

4.  $\underline{-\frac{2}{15}\left(\frac{1}{3}e - \frac{7}{2}\right)}$

5.  $\underline{\frac{2}{4}\left(\frac{7}{9}f - \frac{6}{7}\right)}$

6.  $\underline{-\frac{20}{8}\left(\frac{1}{9}g + \frac{1}{8}\right)}$

7.  $\underline{\frac{2}{12}\left(\frac{1}{1}h + \frac{1}{4}\right)}$

8.  $\underline{\frac{3}{8}\left(\frac{5}{7}i + \frac{1}{4}\right)}$

9.  $\underline{\frac{3}{16}\left(\frac{2}{3}j - \frac{3}{1}\right)}$

10.  $\underline{-\frac{3}{32}\left(\frac{1}{1}k + \frac{1}{1}\right)}$



Factor each expression completely.

1)  $-\frac{4}{18}b + \frac{4}{54} =$  \_\_\_\_\_

2)  $-\frac{12}{24}c - \frac{12}{12} =$  \_\_\_\_\_

3)  $\frac{4}{42}d + \frac{8}{28} =$  \_\_\_\_\_

4)  $-\frac{8}{36}e - \frac{12}{36} =$  \_\_\_\_\_

5)  $-\frac{8}{32}f + \frac{12}{48} =$  \_\_\_\_\_

6)  $-\frac{3}{16}g + \frac{3}{56} =$  \_\_\_\_\_

7)  $\frac{20}{30}h + \frac{12}{45} =$  \_\_\_\_\_

8)  $\frac{12}{36}i + \frac{16}{20} =$  \_\_\_\_\_

9)  $-\frac{6}{32}j + \frac{3}{32} =$  \_\_\_\_\_

10)  $-\frac{4}{21}k + \frac{8}{35} =$  \_\_\_\_\_

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



Factor each expression completely.

$$1) \quad -\frac{4}{18}b + \frac{4}{54} = \underline{-\frac{4}{18}\left(\frac{1}{1}b - \frac{1}{3}\right)}$$

$$2) \quad -\frac{12}{24}c - \frac{12}{12} = \underline{-\frac{12}{12}\left(\frac{1}{2}c + \frac{1}{1}\right)}$$

$$3) \quad \frac{4}{42}d + \frac{8}{28} = \underline{\frac{4}{14}\left(\frac{1}{3}d + \frac{2}{2}\right)}$$

$$4) \quad -\frac{8}{36}e - \frac{12}{36} = \underline{-\frac{4}{36}\left(\frac{2}{1}e + \frac{3}{1}\right)}$$

$$5) \quad -\frac{8}{32}f + \frac{12}{48} = \underline{-\frac{4}{16}\left(\frac{2}{2}f - \frac{3}{3}\right)}$$

$$6) \quad -\frac{3}{16}g + \frac{3}{56} = \underline{-\frac{3}{8}\left(\frac{1}{2}g - \frac{1}{7}\right)}$$

$$7) \quad \frac{20}{30}h + \frac{12}{45} = \underline{\frac{4}{15}\left(\frac{5}{2}h + \frac{3}{3}\right)}$$

$$8) \quad \frac{12}{36}i + \frac{16}{20} = \underline{\frac{4}{4}\left(\frac{3}{9}i + \frac{4}{5}\right)}$$

$$9) \quad -\frac{6}{32}j + \frac{3}{32} = \underline{-\frac{3}{32}\left(\frac{2}{1}j - \frac{1}{1}\right)}$$

$$10) \quad -\frac{4}{21}k + \frac{8}{35} = \underline{-\frac{4}{7}\left(\frac{1}{3}k - \frac{2}{5}\right)}$$

**Answers**

1.  $\underline{-\frac{4}{18}\left(\frac{1}{1}b - \frac{1}{3}\right)}$

2.  $\underline{-\frac{12}{12}\left(\frac{1}{2}c + \frac{1}{1}\right)}$

3.  $\underline{\frac{4}{14}\left(\frac{1}{3}d + \frac{2}{2}\right)}$

4.  $\underline{-\frac{4}{36}\left(\frac{2}{1}e + \frac{3}{1}\right)}$

5.  $\underline{-\frac{4}{16}\left(\frac{2}{2}f - \frac{3}{3}\right)}$

6.  $\underline{-\frac{3}{8}\left(\frac{1}{2}g - \frac{1}{7}\right)}$

7.  $\underline{\frac{4}{15}\left(\frac{5}{2}h + \frac{3}{3}\right)}$

8.  $\underline{\frac{4}{4}\left(\frac{3}{9}i + \frac{4}{5}\right)}$

9.  $\underline{-\frac{3}{32}\left(\frac{2}{1}j - \frac{1}{1}\right)}$

10.  $\underline{-\frac{4}{7}\left(\frac{1}{3}k - \frac{2}{5}\right)}$





Factor each expression completely.

1)  $\frac{2}{24}b - \frac{10}{16} =$  \_\_\_\_\_

2)  $\frac{3}{18}c + \frac{6}{42} =$  \_\_\_\_\_

3)  $-\frac{4}{18}d - \frac{4}{45} =$  \_\_\_\_\_

4)  $-\frac{12}{45}e + \frac{3}{81} =$  \_\_\_\_\_

5)  $\frac{16}{30}f + \frac{20}{25} =$  \_\_\_\_\_

6)  $\frac{8}{35}g - \frac{12}{35} =$  \_\_\_\_\_

7)  $-\frac{3}{42}h + \frac{6}{56} =$  \_\_\_\_\_

8)  $\frac{4}{20}i - \frac{12}{20} =$  \_\_\_\_\_

9)  $-\frac{3}{72}j + \frac{21}{45} =$  \_\_\_\_\_

10)  $\frac{15}{36}k + \frac{21}{24} =$  \_\_\_\_\_

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



Factor each expression completely.

$$1) \frac{2}{24}b - \frac{10}{16} = \frac{2}{8}(\frac{1}{3}b - \frac{5}{2})$$

$$2) \frac{3}{18}c + \frac{6}{42} = \frac{3}{6}(\frac{1}{3}c + \frac{2}{7})$$

$$3) -\frac{4}{18}d - \frac{4}{45} = \frac{-4}{9}(\frac{1}{2}d + \frac{1}{5})$$

$$4) -\frac{12}{45}e + \frac{3}{81} = \frac{-3}{9}(\frac{4}{5}e - \frac{1}{9})$$

$$5) \frac{16}{30}f + \frac{20}{25} = \frac{4}{5}(\frac{4}{6}f + \frac{5}{5})$$

$$6) \frac{8}{35}g - \frac{12}{35} = \frac{4}{35}(\frac{2}{1}g - \frac{3}{1})$$

$$7) -\frac{3}{42}h + \frac{6}{56} = \frac{-3}{14}(\frac{1}{3}h - \frac{2}{4})$$

$$8) \frac{4}{20}i - \frac{12}{20} = \frac{4}{20}(\frac{1}{1}i - \frac{3}{1})$$

$$9) -\frac{3}{72}j + \frac{21}{45} = \frac{-3}{9}(\frac{1}{8}j - \frac{7}{5})$$

$$10) \frac{15}{36}k + \frac{21}{24} = \frac{3}{12}(\frac{5}{3}k + \frac{7}{2})$$

**Answers**

1.  $\frac{2}{8}(\frac{1}{3}b - \frac{5}{2})$

2.  $\frac{3}{6}(\frac{1}{3}c + \frac{2}{7})$

3.  $\frac{-4}{9}(\frac{1}{2}d + \frac{1}{5})$

4.  $\frac{-3}{9}(\frac{4}{5}e - \frac{1}{9})$

5.  $\frac{4}{5}(\frac{4}{6}f + \frac{5}{5})$

6.  $\frac{4}{35}(\frac{2}{1}g - \frac{3}{1})$

7.  $\frac{-3}{14}(\frac{1}{3}h - \frac{2}{4})$

8.  $\frac{4}{20}(\frac{1}{1}i - \frac{3}{1})$

9.  $\frac{-3}{9}(\frac{1}{8}j - \frac{7}{5})$

10.  $\frac{3}{12}(\frac{5}{3}k + \frac{7}{2})$



Factor each expression completely.

1)  $\frac{24}{54}b + \frac{18}{36} =$  \_\_\_\_\_

2)  $\frac{4}{63}c - \frac{6}{14} =$  \_\_\_\_\_

3)  $-\frac{10}{36}d - \frac{6}{30} =$  \_\_\_\_\_

4)  $-\frac{4}{15}e - \frac{8}{10} =$  \_\_\_\_\_

5)  $-\frac{16}{64}f - \frac{20}{24} =$  \_\_\_\_\_

6)  $\frac{2}{36}g + \frac{2}{72} =$  \_\_\_\_\_

7)  $-\frac{21}{56}h + \frac{3}{49} =$  \_\_\_\_\_

8)  $-\frac{6}{48}i + \frac{12}{64} =$  \_\_\_\_\_

9)  $-\frac{16}{30}j - \frac{16}{18} =$  \_\_\_\_\_

10)  $\frac{10}{45}k + \frac{12}{30} =$  \_\_\_\_\_

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



Factor each expression completely.

$$1) \frac{24}{54}b + \frac{18}{36} = \frac{6}{18}(\frac{4}{3}b + \frac{3}{2})$$

$$2) \frac{4}{63}c - \frac{6}{14} = \frac{2}{7}(\frac{2}{9}c - \frac{3}{2})$$

$$3) -\frac{10}{36}d - \frac{6}{30} = \frac{-2}{6}(\frac{5}{6}d + \frac{3}{5})$$

$$4) -\frac{4}{15}e - \frac{8}{10} = \frac{-4}{5}(\frac{1}{3}e + \frac{2}{2})$$

$$5) -\frac{16}{64}f - \frac{20}{24} = \frac{-4}{8}(\frac{4}{8}f + \frac{5}{3})$$

$$6) \frac{2}{36}g + \frac{2}{72} = \frac{2}{36}(\frac{1}{18}g + \frac{1}{2})$$

$$7) -\frac{21}{56}h + \frac{3}{49} = \frac{-3}{7}(\frac{7}{8}h - \frac{1}{7})$$

$$8) -\frac{6}{48}i + \frac{12}{64} = \frac{-6}{16}(\frac{1}{3}i - \frac{2}{4})$$

$$9) -\frac{16}{30}j - \frac{16}{18} = \frac{-16}{6}(\frac{1}{5}j + \frac{1}{3})$$

$$10) \frac{10}{45}k + \frac{12}{30} = \frac{2}{15}(\frac{5}{3}k + \frac{6}{2})$$

**Answers**

1.  $\frac{6}{18}(\frac{4}{3}b + \frac{3}{2})$

2.  $\frac{2}{7}(\frac{2}{9}c - \frac{3}{2})$

3.  $\frac{-2}{6}(\frac{5}{6}d + \frac{3}{5})$

4.  $\frac{-4}{5}(\frac{1}{3}e + \frac{2}{2})$

5.  $\frac{-4}{8}(\frac{4}{8}f + \frac{5}{3})$

6.  $\frac{2}{36}(\frac{1}{18}g + \frac{1}{2})$

7.  $\frac{-3}{7}(\frac{7}{8}h - \frac{1}{7})$

8.  $\frac{-6}{16}(\frac{1}{3}i - \frac{2}{4})$

9.  $\frac{-16}{6}(\frac{1}{5}j + \frac{1}{3})$

10.  $\frac{2}{15}(\frac{5}{3}k + \frac{6}{2})$