

### 4.3.C - 4.3.D – Comparing Fractions with different numerators and denominators

#### Problem Set: 1

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<b>1.</b>  A	<b>2.</b>  C	<b>3.</b>  C	<b>4.</b>  C	<b>5.</b>  D	<b>6.</b>  A
<b>7.</b>  A	<b>8.</b>  D	<b>9.</b>  B	<b>10.</b>  B	<b>11.</b>  C	<b>12.</b>  A
<b>13.</b>  D	<b>14.</b>  D	<b>15.</b>  A	<b>16.</b>  D	<b>17.</b>  B	<b>18.</b>  B
<b>19.</b>  D	<b>20.</b>  B	<b>21.</b>  A	<b>22.</b>  C	<b>23.</b>  A	<b>24.</b>  C
<b>25.</b>  C	<b>26.</b>  B	<b>27.</b>  D	<b>28.</b>  B	<b>29.</b>  C	<b>30.</b>  A



1. Which fraction belongs in the  to make this comparison true?

$$\frac{5}{10} > \square$$

A.  $\frac{1}{4}$

B.  $\frac{2}{3}$

C.  $\frac{1}{2}$

D.  $\frac{3}{5}$

2. The thickness of Jacob's cell phone is  $\frac{3}{8}$  inch. The thickness of Crosby's cell phone is less than Jacob's. Which measurement could be the thickness of Crosby's cellphone?

A.  $\frac{2}{5}$  inch

B.  $\frac{4}{7}$  inch

C.  $\frac{1}{3}$  inch

D.  $\frac{5}{6}$  inch

3. This chart shows 4 comparisons.

W	$\frac{8}{12} < \frac{8}{10}$
X	$\frac{8}{12} < \frac{4}{6}$
Y	$\frac{8}{12} < \frac{9}{12}$
Z	$\frac{8}{12} < \frac{6}{8}$

Which of these comparisons are true?

- A. Only W
- B. Only X and Z
- C. Only W, Y, and Z
- D. None of these

4. The table shows the fractions of the bulletin boards in four classrooms that will be used to display artwork. Which comparison is true?

A.  $\frac{2}{4} < \frac{4}{8}$

B.  $\frac{4}{8} > \frac{5}{10}$

C.  $\frac{5}{6} > \frac{4}{8}$

D.  $\frac{5}{6} < \frac{5}{10}$

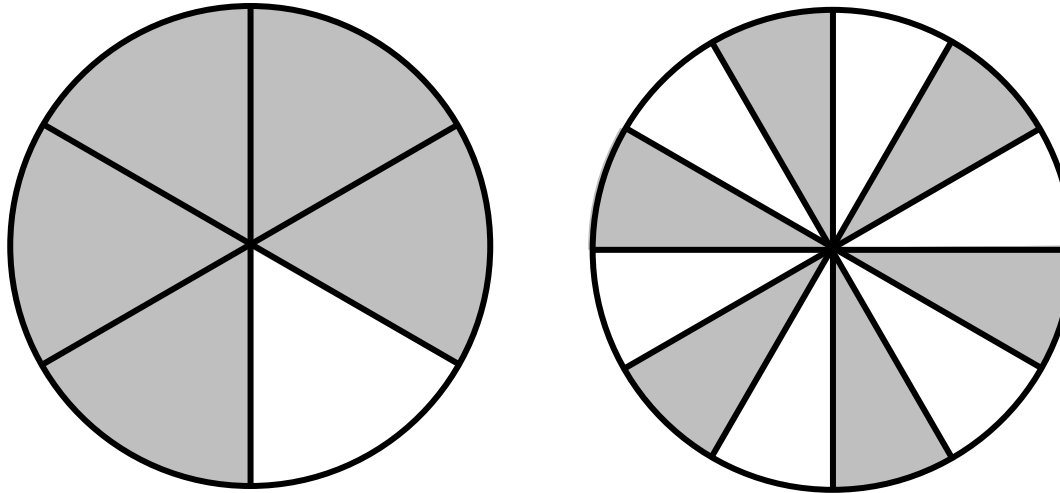
Artwork on Bulletin Boards

Teacher	Fraction for Artwork
Ms. Brady	$\frac{5}{10}$
Mr. Chang	$\frac{2}{4}$
Ms. Gupta	$\frac{5}{6}$
Mr. Taylor	$\frac{4}{8}$

5. Which statement about the fractions  $\frac{5}{10}$  and  $\frac{6}{12}$  is true?

- A. These fractions are both greater than 1, because their denominators are greater than their numerators.
- B. These fractions are both equal to 1, because their denominators are greater than their numerators.
- C. These fractions are equivalent, because their denominators are half their numerators.
- D. These fractions are equivalent, because their denominators are twice their numerators.

6. The models are shaded to represent two fractions.



Which statement correctly compares these two fractions?

A.  $\frac{5}{6} > \frac{6}{12}$

B.  $\frac{5}{6} = \frac{6}{12}$

C.  $\frac{5}{6} < \frac{6}{12}$

D. None of these



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#### Problem Set: 2

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<b>1.</b>  A	<b>2.</b>  C	<b>3.</b>  C	<b>4.</b>  C	<b>5.</b>  D	<b>6.</b>  A
<b>7.</b>  A	<b>8.</b>  D	<b>9.</b>  B	<b>10.</b>  B	<b>11.</b>  C	<b>12.</b>  A
<b>13.</b>  D	<b>14.</b>  D	<b>15.</b>  A	<b>16.</b>  D	<b>17.</b>  B	<b>18.</b>  B
<b>19.</b>  D	<b>20.</b>  B	<b>21.</b>  A	<b>22.</b>  C	<b>23.</b>  A	<b>24.</b>  C
<b>25.</b>  C	<b>26.</b>  B	<b>27.</b>  D	<b>28.</b>  B	<b>29.</b>  C	<b>30.</b>  A



7. Which comparison is true?

A.  $\frac{1}{5} < \frac{2}{4}$

B.  $\frac{2}{3} < \frac{1}{2}$

C.  $\frac{1}{4} < \frac{2}{10}$

D.  $\frac{1}{3} < \frac{2}{7}$

8. Marci and Minnie are twins. Marci has eaten  $\frac{8}{12}$  of her birthday cake. Minnie has eaten  $\frac{4}{6}$  of her birthday cake.

Which of the twins has eaten more of her birthday cake?

A. Marci because,  $\frac{8}{12} > \frac{4}{6}$

B. Minnie because,  $\frac{4}{6} > \frac{8}{12}$

C. Marci because,  $\frac{4}{6} < \frac{8}{12}$

D. They have eaten the same amount because,  $\frac{4}{6} = \frac{8}{12}$

9. This chart shows 4 comparisons.

W	$\frac{4}{5} < \frac{2}{10}$
X	$\frac{4}{5} > \frac{6}{12}$
Y	$\frac{4}{5} > \frac{9}{15}$
Z	$\frac{4}{5} > \frac{5}{6}$

Which of these comparisons are true?

A. Only W

B. Only X and Y

C. Only W, Y, and Z

D. None of these

10. An office has three baskets of letters ready to be mailed. The first basket was  $\frac{2}{10}$  full. The second basket was  $\frac{3}{6}$  full, and the third basket was  $\frac{1}{5}$  full.

Which comparison is true?

A.  $\frac{1}{5} > \frac{3}{6}$

B.  $\frac{2}{10} = \frac{1}{5}$

C.  $\frac{3}{6} < \frac{2}{10}$

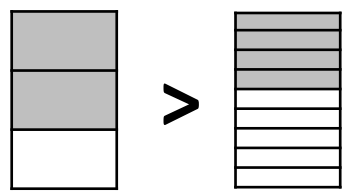
D.  $\frac{1}{5} > \frac{2}{10}$

11. Which statement about the fractions  $\frac{6}{8}$  and  $\frac{9}{12}$  is true?

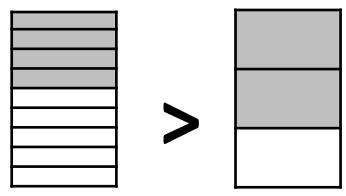
- A. These fractions are both greater than 1, because their denominators are greater than their numerators.
- B. These fractions are both equal to 1, because their denominators are greater than their numerators.
- C. These fractions are equivalent, because they are both equal to  $\frac{3}{4}$ .
- D. These fractions are equivalent, because their denominators are three times as big as their numerators.

12. Sergio completed  $\frac{2}{3}$  of a project. Julius completed  $\frac{4}{9}$  of an identical project. Each student shaded a model to represent the fraction of the project he completed. Which student completed more of his project?

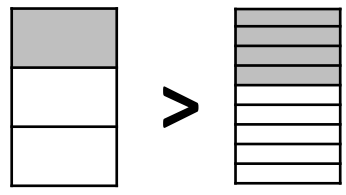
A. Sergio completed more, because



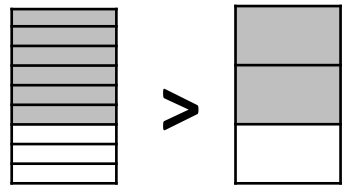
B. Julius completed more, because



C. Sergio completed more, because



D. Julius completed more, because





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#### Problem Set: 3

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<b>7.</b>  A	<b>8.</b>  D	<b>9.</b>  B	<b>10.</b>  B	<b>11.</b>  C	<b>12.</b>  A
<b>13.</b>  D	<b>14.</b>  D	<b>15.</b>  A	<b>16.</b>  D	<b>17.</b>  B	<b>18.</b>  B
<b>19.</b>  D	<b>20.</b>  B	<b>21.</b>  A	<b>22.</b>  C	<b>23.</b>  A	<b>24.</b>  C
<b>25.</b>  C	<b>26.</b>  B	<b>27.</b>  D	<b>28.</b>  B	<b>29.</b>  C	<b>30.</b>  A



13. Which fraction belongs in the  to make this comparison true?

$$\frac{3}{4} < \square$$

A.  $\frac{1}{3}$

B.  $\frac{2}{9}$

C.  $\frac{3}{5}$

D.  $\frac{7}{8}$

14. Felicia the fly is  $\frac{4}{6}$  inch long. Freddie the Fly is shorter than Felicia. Which measurement could be Freddy's length?

A.  $\frac{2}{3}$  inch

B.  $\frac{3}{4}$  inch

C.  $\frac{5}{6}$  inch

D.  $\frac{2}{8}$  inch

15. This chart shows 4 comparisons.

W	$\frac{6}{10} < \frac{4}{5}$
X	$\frac{6}{10} > \frac{8}{9}$
Y	$\frac{6}{10} > \frac{7}{9}$
Z	$\frac{6}{10} < \frac{2}{5}$

Which of these comparisons are true?

- A. Only W
- B. Only X and Z
- C. Only W, Y, and Z
- D. None of these

16. Trevor jogged the following fractions of a mile last week.

- Monday:  $\frac{3}{4}$  mile
- Tuesday:  $\frac{5}{10}$  mile
- Friday:  $\frac{4}{5}$  mile

Which comparison of these fractions of a mile is true?

A.  $\frac{4}{5} < \frac{5}{10}$

B.  $\frac{4}{5} < \frac{3}{4}$

C.  $\frac{3}{4} < \frac{5}{10}$

D.  $\frac{3}{4} < \frac{4}{5}$

17. Ms. Thompson needs  $\frac{15}{2}$  yards of red fabric and  $7\frac{1}{2}$  yards of silver fabric. Which comparison is true?

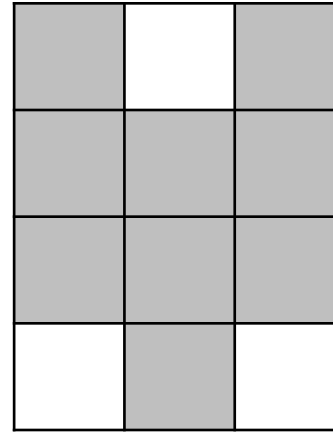
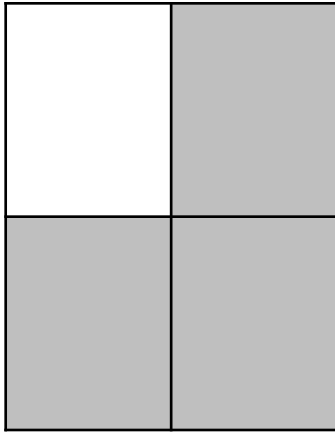
A.  $\frac{15}{2} > 7\frac{1}{2}$

B.  $\frac{15}{2} = 7\frac{1}{2}$

C.  $\frac{15}{2} < 7\frac{1}{2}$

D. None of these

18. The models are shaded to represent two fractions.



Which statement correctly compares these two fractions?

A.  $\frac{3}{4} > \frac{9}{12}$

B.  $\frac{3}{4} = \frac{9}{12}$

C.  $\frac{3}{4} < \frac{9}{12}$

D. None of these



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#### Problem Set: 4

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<b>7.</b>  A	<b>8.</b>  D	<b>9.</b>  B	<b>10.</b>  B	<b>11.</b>  C	<b>12.</b>  A
<b>13.</b>  D	<b>14.</b>  D	<b>15.</b>  A	<b>16.</b>  D	<b>17.</b>  B	<b>18.</b>  B
<b>19.</b>  D	<b>20.</b>  B	<b>21.</b>  A	<b>22.</b>  C	<b>23.</b>  A	<b>24.</b>  C
<b>25.</b>  C	<b>26.</b>  B	<b>27.</b>  D	<b>28.</b>  B	<b>29.</b>  C	<b>30.</b>  A



19. Which fraction belongs in the  to make this comparison true?

$$\frac{3}{10} > \square$$

A.  $\frac{3}{5}$

B.  $\frac{7}{8}$

C.  $\frac{1}{2}$

D.  $\frac{1}{5}$

20. Alfredo is practicing making pancakes – but they are coming out too thick! The first pancake he made was  $\frac{3}{5}$  inch thick. The second pancake was even thicker! Which of these could be the thickness of the 2<sup>nd</sup> pancake?

A.  $\frac{3}{6}$  inch

B.  $\frac{5}{6}$  inch

C.  $\frac{4}{9}$  inch

D.  $\frac{6}{10}$  inch

21. This chart shows 4 comparisons.

W	$\frac{3}{8} < \frac{1}{2}$
X	$\frac{3}{8} > \frac{3}{4}$
Y	$\frac{3}{8} > \frac{4}{16}$
Z	$\frac{3}{8} > \frac{9}{24}$

Which of these comparisons are true?

- A. Only W and Y
- B. Only X and Z
- C. Only W, Y, and Z
- D. All of these

22. The table shows the fractions of a foot that the snail family can travel in an hour. Which comparison is true?

A.  $\frac{6}{12} > \frac{2}{3}$

B.  $\frac{2}{3} > \frac{5}{6}$

C.  $\frac{3}{4} = \frac{6}{12}$

D.  $\frac{5}{6} = \frac{3}{4}$

Snail	Fraction of a foot crawled in an hour
Mother Snail	$\frac{3}{4}$
Father Snail	$\frac{6}{12}$
Brother Snail	$\frac{2}{3}$
Sister Snail	$\frac{5}{6}$

23. Daisja needs  $2\frac{5}{8}$  gallons of yellow paint and  $\frac{12}{8}$  gallons of blue paint. Which comparison is true?

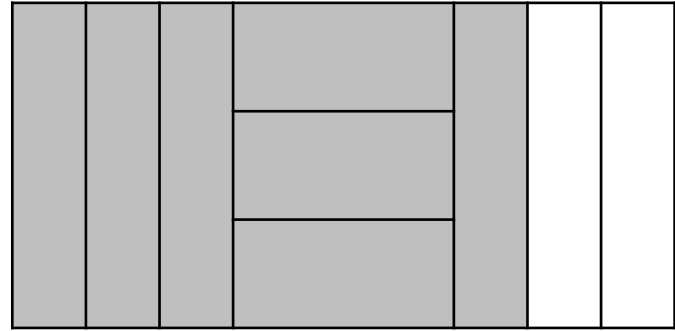
A.  $2\frac{5}{8} > \frac{12}{8}$

B.  $2\frac{5}{8} = \frac{12}{8}$

C.  $2\frac{5}{8} < \frac{12}{8}$

D. None of these

24. The models are shaded to represent two fractions.



Which statement correctly compares these two fractions?

A.  $\frac{2}{3} > \frac{7}{9}$

B.  $\frac{2}{3} = \frac{7}{9}$

C.  $\frac{2}{3} < \frac{7}{9}$

D. None of these



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#### Problem Set: 5

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<b>1.</b>  A	<b>2.</b>  C	<b>3.</b>  C	<b>4.</b>  C	<b>5.</b>  D	<b>6.</b>  A
<b>7.</b>  A	<b>8.</b>  D	<b>9.</b>  B	<b>10.</b>  B	<b>11.</b>  C	<b>12.</b>  A
<b>13.</b>  D	<b>14.</b>  D	<b>15.</b>  A	<b>16.</b>  D	<b>17.</b>  B	<b>18.</b>  B
<b>19.</b>  D	<b>20.</b>  B	<b>21.</b>  A	<b>22.</b>  C	<b>23.</b>  A	<b>24.</b>  C
<b>25.</b>  C	<b>26.</b>  B	<b>27.</b>  D	<b>28.</b>  B	<b>29.</b>  C	<b>30.</b>  A



25. Which comparison is true?

A.  $\frac{7}{9} < \frac{5}{8}$

B.  $\frac{3}{8} < \frac{1}{5}$

C.  $\frac{3}{4} > \frac{4}{6}$

D.  $\frac{1}{8} > \frac{3}{6}$

26. Sammy Snail is super slow, and Susie Snail is even slower. Sammy can crawl  $\frac{5}{9}$  of a foot in an hour. Susie cannot crawl that far. Which of these could be the distance that Susie Snail can crawl in an hour?

A.  $\frac{2}{3}$  foot

B.  $\frac{3}{6}$  foot

C.  $\frac{14}{18}$  foot

D.  $\frac{4}{6}$  foot

27. This chart shows 4 comparisons.

W	$\frac{4}{12} < \frac{5}{10}$
X	$\frac{4}{12} < \frac{2}{3}$
Y	$\frac{4}{12} < \frac{3}{4}$
Z	$\frac{4}{12} > \frac{2}{8}$

Which of these comparisons are true?

- A. Only W
- B. Only X and Z
- C. Only W, Y, and Z
- D. All of these

28. Alfredo is learning to make pancakes. Most of his pancakes are coming out too thick, but some are OK. Here are the thicknesses of his first 4 pancakes. Which comparison is true?

A.  $\frac{2}{8} > \frac{9}{12}$

B.  $\frac{9}{12} > \frac{5}{10}$

C.  $\frac{5}{10} > \frac{2}{3}$

D.  $\frac{2}{3} < \frac{2}{8}$

Pancake	Thickness in inches
1 <sup>st</sup> try	$\frac{2}{8}$
2 <sup>nd</sup> try	$\frac{9}{12}$
3 <sup>rd</sup> try	$\frac{5}{10}$
4 <sup>th</sup> try	$\frac{2}{3}$

29. Ridiculous Rachel needs  $\frac{28}{8}$  cups of ketchup and  $3\frac{7}{8}$  cups of mustard to make her special ice cream topping. Which comparison is true?

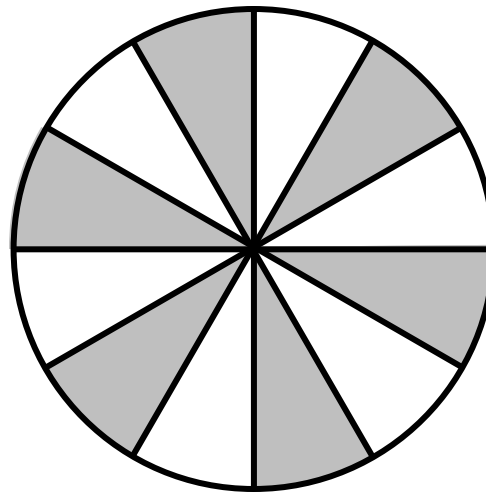
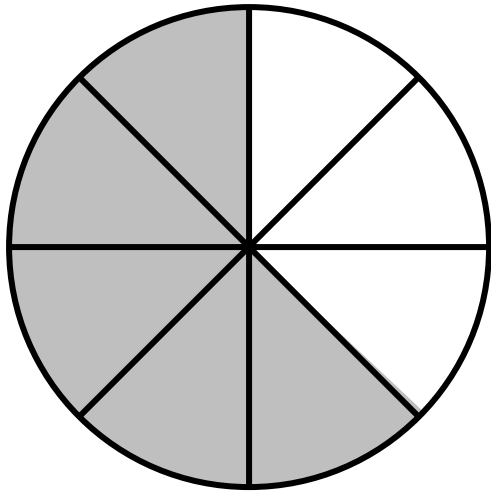
A.  $\frac{28}{8} > 3\frac{7}{8}$

B.  $\frac{28}{8} = 3\frac{7}{8}$

C.  $\frac{28}{8} < 3\frac{7}{8}$

D. None of these

30. The models are shaded to represent two fractions.



Which statement correctly compares these two fractions?

A.  $\frac{5}{8} > \frac{6}{12}$

B.  $\frac{5}{8} = \frac{6}{12}$

C.  $\frac{5}{8} < \frac{6}{12}$

D. None of these