

Math 8 Chapter 3 Part 1 Review Pack v1**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- _____ 1. Write this multiplication statement as repeated addition.

$$2 \times \frac{1}{6}$$

A. $\frac{1}{6} + \frac{1}{6} + \frac{1}{6}$

C. $\frac{1}{6} \times \frac{1}{6}$

B. $\frac{1}{6} + \frac{1}{6}$

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

- _____ 2. Multiply. $7 \times \frac{2}{7}$

A. 2

B. $\frac{14}{49}$

C. $\frac{51}{7}$

D. $\frac{9}{7}$

- _____ 3. Evaluate. $\frac{2}{5} + \frac{2}{5} + \frac{2}{5} + \frac{2}{5} + \frac{2}{5}$

A. $\frac{10}{25}$

B. $\frac{2}{25}$

C. 2

D. $\frac{8}{5}$

- _____ 4. Find $\frac{5}{6}$ of 30.

A. 150

B. 5

C. 25

D. $30\frac{5}{6}$

- _____ 5. Find $\frac{7}{9}$ of 36.

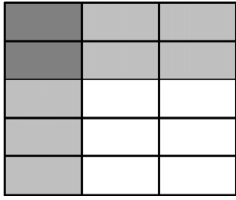
A. $\frac{1}{28}$

B. $4\frac{7}{9}$

C. 28

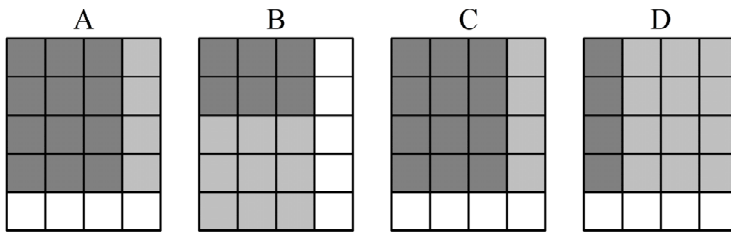
D. 11

___ 6. What product can be represented by the darkest area in this model?



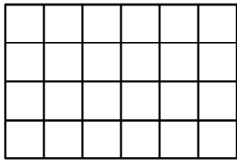
- A. $\frac{5}{6} \times \frac{2}{3}$ B. $\frac{5}{6} \times \frac{3}{5}$ C. $\frac{2}{5} \times \frac{1}{3}$ D. $\frac{5}{6} \times \frac{2}{3}$

___ 7. Which diagram represents $\frac{1}{4}$ of $\frac{4}{5}$?



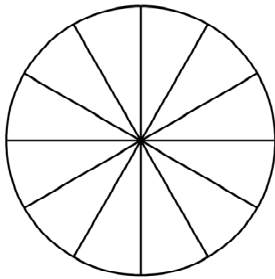
- A. Diagram A C. Diagram C
B. Diagram B D. Diagram D

___ 8. How many small squares in this rectangle should be shaded to represent $\frac{1}{4}$ of $\frac{1}{2}$?



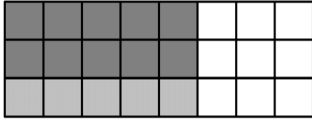
- A. 3 B. 4 C. 6 D. 8

___ 9. How many sectors in this circle should be shaded to represent $\frac{3}{4}$ of $\frac{1}{3}$?



- A. 9 B. 3 C. 4 D. 7

- ___ 10. Write the multiplication equation represented by this diagram.



- A. $\frac{2}{3} \times \frac{5}{8} = \frac{5}{12}$ C. $\frac{1}{3} \times \frac{5}{8} = \frac{5}{24}$
 B. $\frac{3}{1} \times \frac{5}{8} = \frac{15}{18}$ D. $\frac{2}{3} \times \frac{10}{8} = \frac{5}{6}$
- ___ 11. Find this product. $\frac{3}{4} \times \frac{4}{5}$
 A. $\frac{3}{5}$ B. $\frac{7}{20}$ C. $\frac{7}{9}$ D. $\frac{2}{3}$
- ___ 12. Multiply. $\frac{3}{8} \times \frac{2}{5}$
 A. $\frac{15}{16}$ B. $\frac{3}{20}$ C. $\frac{1}{8}$ D. $\frac{6}{13}$
- ___ 13. Find the reciprocal of $\frac{3}{11}$.
 A. $\frac{11}{3}$ B. $\frac{-3}{-11}$ C. $\frac{-3}{11}$ D. $\frac{-11}{3}$
- ___ 14. Find the greatest common factor of 20 and 30.
 A. 2 B. 5 C. 10 D. 20
- ___ 15. Multiply: $\frac{5}{3} \times \frac{8}{15}$
 A. $\frac{8}{9}$ B. $\frac{13}{18}$ C. $\frac{99}{45}$ D. $\frac{13}{45}$
- ___ 16. Two-fifths of Aika's stamp collection are European stamps.
 One-half of her European stamps are from France.
 What fraction of Aika's stamps are from France?
 A. $\frac{3}{10}$ B. $\frac{1}{10}$ C. $\frac{1}{5}$ D. $\frac{4}{5}$

_____ 17. Write $3\frac{2}{3}$ as an improper fraction.

A. $\frac{15}{3}$

B. $\frac{11}{3}$

C. $\frac{8}{3}$

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

_____ 18. Write $\frac{29}{6}$ as a mixed number.

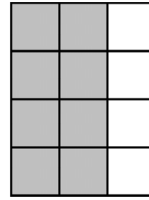
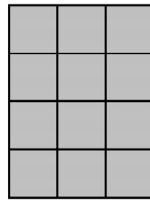
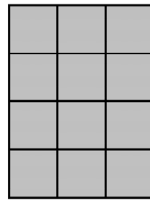
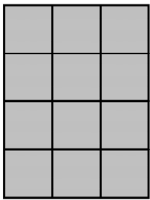
A. $4\frac{5}{6}$

B. $5\frac{4}{6}$

C. $40\frac{5}{6}$

D. $4\frac{1}{6}$

_____ 19. Write a mixed number and an improper fraction for this model.



A. $3\frac{8}{12}; \frac{8}{3}$

B. $3\frac{2}{3}; \frac{8}{3}$

C. $3\frac{2}{3}; \frac{11}{3}$

D. $3\frac{1}{3}; \frac{10}{3}$

_____ 20. Multiply. $\frac{1}{5} \times 2\frac{7}{8}$

A. $1\frac{17}{23}$

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

C. $\frac{5}{8}$

D. $\frac{23}{40}$

_____ 21. Multiply. $1\frac{1}{3} \times 2\frac{1}{3}$

A. $1\frac{2}{9}$

B. $3\frac{1}{9}$

C. $2\frac{1}{9}$

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

_____ 22. Multiply. $2\frac{1}{2} \times 2\frac{1}{3}$

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

B. $4\frac{1}{3}$

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

D. $4\frac{1}{6}$

_____ 23. Multiply. $3\frac{2}{3} \times 4\frac{1}{2}$

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

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

C. $16\frac{1}{2}$

D. $\frac{22}{27}$

- ____ 24. Multiply. $1\frac{1}{2} \times 5\frac{3}{7}$
- A. $5\frac{3}{14}$ B. $6\frac{3}{14}$ C. $8\frac{1}{7}$ D. $5\frac{2}{7}$

Short Answer

25. If it takes $\frac{5}{6}$ h to make a widget, how long will it take to make 13 widgets?
26. Two-thirds of the Grade 8 students play on a soccer team. Of those who play on a soccer team, one-half are girls. What fraction of the Grade 8 students are the girls who play soccer?

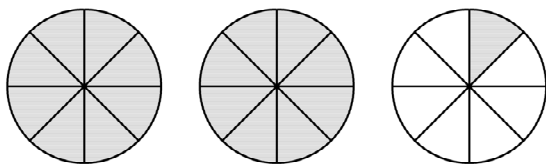
27. Multiply: $\frac{9}{10} \times \frac{11}{9} \times \frac{10}{11}$

28. Replace \square with a whole number to make the equation true.

$$\frac{\square}{12} \times \frac{4}{5} = \frac{7}{15}$$

29. Evaluate. $\sqrt{\frac{25}{36}}$

30. Write the mixed number and the improper fraction represented by this picture.



31. The Dugdales family went camping and it took $8\frac{1}{2}$ h to drive to a camp site. After camping, it took $2\frac{1}{2}$ times as long to drive home due to an accident on a major road. How long did it take the Dugdales family to drive home?

Problem

32. a) Evaluate. Show your steps.

i) $\frac{4}{5} \times 15 + \frac{4}{5} \times 25$

ii) $\frac{4}{5} \times (15 + 25)$

What do you notice about your answers?

- b) Use what you have learned in part a) to evaluate. $\frac{6}{7} \times 25 + \frac{6}{7} \times 10$

33. Draw area models to find these products: $\frac{1}{2} \times \frac{2}{3}$, $\frac{2}{3} \times \frac{3}{4}$, $\frac{3}{4} \times \frac{4}{5}$, ...

Look for a pattern in your results and use the pattern to predict this product. $\frac{17}{18} \times \frac{18}{19}$

34. Andrea spends four-fifths of her money on books. She then spends one-third of the rest on food. What fraction of her original money does Andrea spend on food?

35. Simplify $\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \dots \frac{24}{25}$. Explain your answer.

36. Jake had 60 marbles. He gave $\frac{3}{5}$ to Mary. He then gave $\frac{1}{4}$ of the rest to Alexa.

What fraction of his marbles did Jake have left? Explain your work.

37. Evaluate. $(1\frac{5}{6} + 2\frac{1}{3}) \times 1\frac{3}{5}$