

Converting Fractions to Decimals and Back

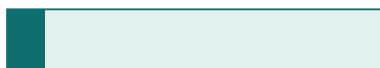
Unit: Decimals - Student Practice Worksheet

Overview: A tailor's price list showed cloth at Rs $\frac{3}{4}$ per metre in one column and Rs 0.75 per metre in another. A customer complained the shop was showing two different prices for the same cloth. The shopkeeper's daughter, Meher, had to prove — right there at the counter — that $\frac{3}{4}$ and 0.75 were exactly the same amount of money.

Practice Questions (30 Total)

Section A - Easy

Q1. One of ten equal parts of the bar. Decimal?



$$1/10 = 0.1$$

- ☐ A. 0.1
- ☐ B. 1.0
- ☐ C. 0.01
- ☐ D. 10.0

Q2. Convert 0.2 to a fraction in simplest form.

- ☐ A. $\frac{2}{10}$
- ☐ B. $\frac{1}{5}$
- ☐ C. $\frac{2}{100}$
- ☐ D. $\frac{1}{2}$

Q3. Convert $\frac{1}{2}$ to a decimal.

- ☐ A. 0.5
- ☐ B. 0.2
- ☐ C. 2.0
- ☐ D. 0.12

Q4. One of four equal parts of the bar. Decimal?



$$1/4 = 0.25$$

- ☐ A. 0.4
- ☐ B. 0.14
- ☐ C. 4.0
- ☐ D. 0.25

Q5. Convert 0.5 to a fraction in simplest form.

- ☐ A. 5/10
- ☐ B. 5/100
- ☐ C. 1/2
- ☐ D. 1/5

Q6. Convert 7/10 to a decimal.

- ☐ A. 7.0
- ☐ B. 0.07
- ☐ C. 0.7
- ☐ D. 1.7

Q7. Three of four equal parts. Decimal?



$$3/4 = 0.75$$

- ☐ A. 0.34
- ☐ B. 0.75
- ☐ C. 3.4
- ☐ D. 0.43

Q8. Convert 0.25 to a fraction in simplest form.

- ☐ A. 25/100
- ☐ B. 1/4
- ☐ C. 2/5
- ☐ D. 1/25

Q9. Convert $\frac{1}{100}$ to a decimal.

- ☐ A. 1.00
- ☐ B. 0.1
- ☐ C. 100.0
- ☐ D. 0.01

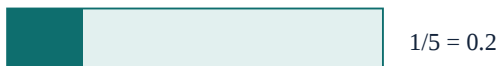
Q10. Shade 0.75 of the bar, then name the simplest fraction.



- ☐ A. $\frac{75}{100}$
- ☐ B. $\frac{7}{5}$
- ☐ C. $\frac{1}{4}$
- ☐ D. $\frac{3}{4}$

Section B - Medium

Q11. One of five equal parts. Decimal?



- ☐ A. 0.2
- ☐ B. 0.5
- ☐ C. 0.15
- ☐ D. 1.5

Q12. Convert 0.6 to a fraction in simplest form.

- ☐ A. $\frac{3}{5}$
- ☐ B. $\frac{6}{10}$
- ☐ C. $\frac{6}{100}$
- ☐ D. $\frac{2}{3}$

Q13. Convert $\frac{7}{20}$ to a decimal.

- ☐ A. 0.7
- ☐ B. 0.27
- ☐ C. 3.5
- ☐ D. 0.35

Q14. Three of five equal parts. Decimal?



- ☐ A. 0.35
- ☐ B. 3.5
- ☐ C. 0.6
- ☐ D. 0.3

Q15. Convert 0.4 to a fraction in simplest form.

- ☐ A. $4/10$
- ☐ B. $2/5$
- ☐ C. $4/100$
- ☐ D. $1/4$

Q16. Convert $1/8$ to a decimal.

- ☐ A. 0.18
- ☐ B. 0.8
- ☐ C. 0.125
- ☐ D. 0.12

Q17. Two of five equal parts. Decimal?



- ☐ A. 0.25
- ☐ B. 2.5
- ☐ C. 0.2
- ☐ D. 0.4

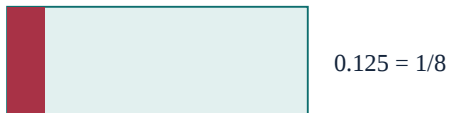
Q18. Convert 0.35 to a fraction in simplest form.

- ☐ A. $35/100$
- ☐ B. $3/5$
- ☐ C. $7/20$
- ☐ D. $35/10$

Q19. Convert $3/8$ to a decimal.

- ☐ A. 0.38
- ☐ B. 0.375
- ☐ C. 3.8
- ☐ D. 0.83

Q20. One-eighth of the rectangle is maroon. Decimal as a simplest fraction?



- ☐ A. $125/1000$
- ☐ B. $1/2$
- ☐ C. $1/8$
- ☐ D. $25/100$

Section C - Challenge

Q21. Five of eight equal parts. Decimal?



- ☐ A. 0.625
- ☐ B. 0.58
- ☐ C. 0.85
- ☐ D. 5.8

Q22. Convert $1/3$ to a decimal.

- ☐ A. 0.3
- ☐ B. 0.333... recurring
- ☐ C. 1.3
- ☐ D. 0.13

Q23. Convert $9/25$ to a decimal.

- ☐ A. 0.9
- ☐ B. 0.925
- ☐ C. 0.36
- ☐ D. 9.25

Q24. Seven of eight equal parts. Decimal?



- ☐ A. 0.875
- ☐ B. 0.78
- ☐ C. 0.87
- ☐ D. 7.8

Q25. Convert $2/3$ to a decimal.

- ☐ A. 0.23
- ☐ B. 2.3
- ☐ C. 0.6
- ☐ D. 0.666... recurring

Q26. Convert $11/40$ to a decimal.

- ☐ A. 0.11
- ☐ B. 0.44
- ☐ C. 11.4
- ☐ D. 0.275

Q27. Teal is $3/8$, maroon is 0.4. Which is greater?

 $\frac{3}{8}$ vs 0.4

- ☐ A. $\frac{3}{8}$
- ☐ B. They are equal
- ☐ C. 0.4
- ☐ D. Cannot be compared

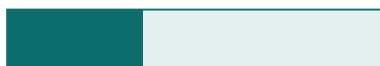
Q28. Meher noticed $\frac{1}{4}$ terminates but $\frac{1}{3}$ does not. What decides which kind a fraction will be?

- ☐ A. Whether the numerator is even
- ☐ B. Whether the fraction is proper or improper
- ☐ C. Whether the denominator is built only from 2s and 5s
- ☐ D. Whether the fraction is already simplified

Q29. Convert 0.875 to a fraction in simplest form.

- ☐ A. $\frac{875}{1000}$
- ☐ B. $\frac{7}{8}$
- ☐ C. $\frac{8}{9}$
- ☐ D. $\frac{17}{20}$

Q30. Shade 0.36 of the bar, then name the simplest fraction.

 $0.36 = \frac{9}{25}$

- ☐ A. $\frac{36}{100}$
- ☐ B. $\frac{18}{50}$
- ☐ C. $\frac{9}{25}$
- ☐ D. $\frac{3}{8}$

Answer Key

- Q1:** (A) (a) 0.1. One tenth goes straight into the first decimal column.
- Q2:** (B) (b) $\frac{1}{5}$. $\frac{2}{10}$ simplifies by dividing both parts by 2.
- Q3:** (A) (a) 0.5. One divided by two is exactly this.
- Q4:** (D) (d) 0.25. One divided by four terminates after two places.
- Q5:** (C) (c) $\frac{1}{2}$. $\frac{5}{10}$ simplifies by dividing both parts by 5.
- Q6:** (C) (c) 0.7. Seven tenths goes straight in.
- Q7:** (B) (b) 0.75. Three divided by four terminates exactly.
- Q8:** (B) (b) $\frac{1}{4}$. $\frac{25}{100}$ simplifies by dividing both parts by their HCF of 25.
- Q9:** (D) (d) 0.01. One hundredth needs two decimal places.
- Q10:** (D) (d) $\frac{3}{4}$. $\frac{75}{100}$ simplifies by dividing both parts by 25.
- Q11:** (A) (a) 0.2. One fifth is two tenths.
- Q12:** (A) (a) $\frac{3}{5}$. $\frac{6}{10}$ simplifies by dividing both parts by 2.
- Q13:** (D) (d) 0.35. Multiply top and bottom by 5 to get $\frac{35}{100}$.
- Q14:** (C) (c) 0.6. Make the denominator 10 by doubling top and bottom: $\frac{6}{10}$.
- Q15:** (B) (b) $\frac{2}{5}$. $\frac{4}{10}$ simplifies by dividing both parts by 2.
- Q16:** (C) (c) 0.125. Eight is $2 \times 2 \times 2$, so it terminates after three places.
- Q17:** (D) (d) 0.4. Two fifths is four tenths.
- Q18:** (C) (c) $\frac{7}{20}$. $\frac{35}{100}$ simplifies by dividing both parts by their HCF of 5.
- Q19:** (B) (b) 0.375. Eight terminates after three places since $8 = 2 \times 2 \times 2$.
- Q20:** (C) (c) $\frac{1}{8}$. $\frac{125}{1000}$ simplifies by dividing both parts by 125.
- Q21:** (A) (a) 0.625. Five divided by eight terminates after three places.
- Q22:** (B) (b) 0.333... recurring. Three cannot be built from only 2s and 5s, so the division never terminates.
- Q23:** (C) (c) 0.36. Multiply top and bottom by 4 to reach $\frac{36}{100}$.
- Q24:** (A) (a) 0.875. Seven divided by eight terminates after three places.
- Q25:** (D) (d) 0.666... recurring. Like $\frac{1}{3}$, this never terminates because of the 3 in the denominator.
- Q26:** (D) (d) 0.275. Forty is $2 \times 2 \times 2 \times 5$, so it terminates after three places.
- Q27:** (C) (c) 0.4, since $\frac{3}{8}$ converts to 0.375, which is less than 0.4.
- Q28:** (C) (c) Whether the denominator is built only from 2s and 5s. Four is 2×2 , so it terminates; three has no factor of 2 or 5, so it recurs.
- Q29:** (B) (b) $\frac{7}{8}$. $\frac{875}{1000}$ simplifies by dividing both parts by 125.
- Q30:** (C) (c) $\frac{9}{25}$. $\frac{36}{100}$ simplifies by dividing both parts by their HCF of 4.

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