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Name : Answer key. Date : / 10 / 2025

Subject: Worksheet (4) / unit (4) Grade : 6 ( )

Fractions

4.1 working with fractions

Q1. Work out the highest common factor of.

a) 24 and 40

24: 1, 2, 3, 4, 6, 8, 12, 24

40: 1, 2, 4, 5, 8, 10, 20, 40

HCF = 8

b) 7 and 35

7: 1 , 7

35: 1, 5, 7, 35

HCF = 7

Q2. Write > , < in the box to make the statement correct.

a. $\frac{9}{8}$ > $\frac{5}{8}$ b. $\frac{3}{4}$ < $\frac{5}{6}$ c. $\frac{5}{12}$ < $\frac{3}{4}$

Q3. A shop sells 24 basketball jerseys. 6 of them are Lakers jerseys.
What fraction of the jerseys are Lakers jerseys?
Write your answer in its simplest form.

$\frac{6}{24} = \frac{1}{4}$.

Q4. Out of the 20 most popular tennis players, 4 are from Spain.
What fraction of the top 20 players are not Spanish?
Write your answer in its simplest form.

$20 - 4 = 16$

$\frac{16}{20} = \frac{4}{5}$.

Q5. The table shows the number of games won by each player in each set of a match in a tennis tournament.

	Set1	Set2	Set3	
Player A	5	3	4	→ 12
Player B	7	6	5	→ 18

12 + 18 → 30

What fraction of all the games in the match did Player A win?
Write your answer in its simplest form.

$\frac{12 \div 6}{30 \div 6} = \frac{2}{5}$.

Q6.

a. What is $\frac{5}{6}$ of 42 kg.

$42 \div 6 = 7$

$5 \times 7 = 35$

35 kg

b. A rectangle is 15 cm long and 8 cm wide.
Layla shades $\frac{2}{5}$ of the rectangle.
What area of the rectangle does Layla shade?

Area $= 15 \times 8$
$= 120 cm^2$

$\frac{2}{5} \times 120 = 120 \div 5$
$= 24 \times 2$
$= 48$

48 cm^2

4.2 Adding and subtracting fractions

Q1. Work out the lowest common multiple.

a. 5 and 7

5: 5, 10, 15, 20, 25, 30, 35.

7: 7, 14, 21, 28, 35.

LCM= 35

b. 9 and 12

9: 9, 18, 27, 36.

12: 12, 24, 36.

LCM= 36

Q2. Write these improper fractions as mixed numbers.

a. $\frac{9}{4} = 2\frac{1}{4}$ b. $\frac{16}{7} = 2\frac{2}{7}$ c. $\frac{23}{3} = 7\frac{2}{3}$.

Q3. Which is larger $1\frac{3}{4}$ or $\frac{6}{4}$?

$\frac{7}{4} > \frac{6}{4}$ → $1\frac{3}{4}$ is larger.

Q4. Work out

a. $\frac{1}{3} + \frac{8}{9} = \frac{1\times3}{3\times3} + \frac{8}{9} = \frac{3}{9} + \frac{8}{9} = \frac{11}{9} = 1\frac{2}{9}$.

b. $\frac{3}{1} - \frac{16}{7} = \frac{3\times7}{1\times7} - \frac{16}{7} = \frac{21}{7} - \frac{16}{7} = \frac{5}{7}$.

c. $5\frac{1}{4} - 2\frac{7}{12} =$

$\frac{21}{4} - \frac{31}{12} = \frac{21\times3}{4\times3} - \frac{31}{12} = \frac{63}{12} - \frac{31}{12} = \frac{32}{12} = \frac{32\div4}{12\div4} = \frac{8}{3} = 2\frac{2}{3}$.

Q5. A carpenter glues together a strip of plastic that is $\frac{7}{12}$ cm thick and a strip of rubber that is $\frac{5}{8}$ cm thick.

* LCM = 24
12, 8

What is the total thickness of two strips? $\frac{7\times2}{12\times2} + \frac{5\times3}{8\times3} = \frac{14}{24} + \frac{15}{24} = \frac{29}{24} = 1$

Q6. Yousef completed $\frac{7}{10}$ of his homework. Dana completed $\frac{3}{4}$ of hers.

Who completed more and by how much? Dana completed more

$\frac{7\times2}{10\times2} [<] \frac{3\times5}{4\times5} \rightarrow \frac{14}{20} [<] \frac{15}{20}$

4.3 fractions, decimals and percentages.

Q1. Complete the table.

Write each fraction in its simplest form.

Fraction	**Decimal**	**Percentage**
$\frac{35}{100} = \frac{7}{20}$	0.35	35%
$\frac{8}{5} = 1\frac{3}{5}$	1.6	160%
$\frac{3}{8}$	0.375	37.5%

Q2. Write these fractions as decimals.

a. $\frac{3}{20} \overset{\times 5}{=} \frac{15}{100} = 0.15$

c. $\frac{12}{16} \overset{\div 4}{=} \frac{3}{4} \times 25 = \frac{75}{100} = 0.75$

b. $\frac{24}{60} = \frac{2}{5} = 0.4$

d. $\frac{13}{5} = 2.6$

- Rule is:

hours → minutes: multiply by 60.

minutes → hours: divided by 60.

Q3. Draw a ring around the numbers that give the same time intervals.

0.25 hour	$\frac{1}{5}$ hour
$\frac{1}{4}$ hour	15 minutes
25 minutes	0.15 hour

$0.25 \times 60 = 15\text{min}$.

$\frac{1}{4} \times 60 = 15\text{min}$

$\frac{1}{5}$ hour = 12min ; 0.15 hour = 9min, 25min is 25min non of those equal 15.

Q5. Using the fact that $\frac{1}{4} = 0.25$ to write the following as decimal.

1. $\frac{3}{4}$ = 0.75

$3 \times \frac{1}{4} = \frac{3}{4}$

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

$\frac{1}{2} = \frac{2}{4}$

$\frac{1}{4} \times \frac{2}{1} = 0.25 \times 2$

$= 0.50$

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

$\frac{1}{4} \times \frac{5}{1} = 0.25 \times 5$

$= 1.25$

Q6. Write the missing numbers.

a. $\frac{8}{50} =$ 16 %

b. $\frac{12}{25} =$ 48 %

c. 24 % = 0.24

4.4 multiplying by a fraction.

Q1. Work out

a. $\frac{3}{4} \times 56 = 56 \div 4$

$= 14 \times 3$

$= 42.$

b. $45 \times \frac{1}{9} = 45 \div 9$

$= 5 \times 1$

$= 5$

c. $14 \times \frac{6}{7} = 14 \div 7$

$= 2 \times 6$

$= 12.$

d. $24 \times \frac{6}{8} = 24 \div 8$

$= 3 \times 6$

$= 18.$

Q2. A recipe needs $\frac{2}{3}$ cup of sugar. Maya makes 4 batches.

How much sugar does she need? $\frac{2}{3} \times 4 = \frac{8}{3} = 2\frac{2}{3}$

$2\frac{2}{3}$ cups

5A 5C

Q3. A rectangle is 18 cm long and 10 cm wide.

Ali shades $\frac{2}{5}$ of the rectangle.

Find the area shaded.

Area $= 18 \times 10$

$= 180\text{ cm}^2$

$\frac{2}{5} \times 180 = 180 \div 5$

$= 36 \times 2$

$= 72\text{ cm}^2$

72 cm^2

Q4. A tank holds 200 litres of water.

$\frac{3}{8}$ leaks out.

How many liters leak out?

$\frac{3}{8} \times 200 = \frac{3 \times 200}{8} = \frac{600 \div 2}{8 \div 2} = \frac{300 \div 2}{4 \div 2}$

$= \frac{150 \div 2}{2 \div 2}$

$= 75$

75 litres

(of)

$\frac{600 \div 8}{8 \div 8} = 75$

* HCF = 8.
(600, 8)

$600 \div 8 = 75$

$60 \div 8 = 7.5$

4.5 working with mixed numbers.

Q1. Work out

a. $1\frac{2}{3}+2\frac{1}{6}=$ $\frac{5}{3}+\frac{13}{6}=\frac{10}{6}+\frac{13}{6}$

$=\frac{23}{6}=3\frac{5}{6}$

b. $3\frac{1}{2}+4\frac{2}{4}=$ $\frac{31}{2}+4\frac{1}{2}$

$=7+\frac{2}{2}$

$=7+1$

$=8.$

c. $4\frac{1}{5}+2\frac{7}{10}=$ $4\frac{2}{10}+2\frac{7}{10}$

$=6+\frac{9}{10}$

$=6\frac{9}{10}.$

d. $6\frac{1}{4}-2\frac{7}{12}=$ _____

$\frac{25\times3}{4\times3}-\frac{31}{12}=\frac{75}{12}-\frac{31}{12}$

$=\frac{44}{12}=\frac{11}{3}=3\frac{2}{3}.$

e. $5\frac{7}{12}-2\frac{1}{4}=$ $\frac{67}{12}-\frac{9\times3}{4\times3}$

$=\frac{67}{12}-\frac{27}{12}$

$=\frac{40\div4}{12\div4}\rightarrow\frac{10}{3}=3\frac{1}{3}.$

f. $5\frac{3}{5}-2\frac{4}{5}=$ _____

$\frac{28}{5}-\frac{14}{5}=\frac{14}{5}$

$=2\frac{4}{5}.$

Q3. Solve the following problems.

a. A board is $6\frac{1}{2}$ metres long. A carpenter cuts off $2\frac{3}{4}$ metres.

How much is left?

$6\frac{1\times2}{2\times2}-2\frac{3}{4}=$

$6+\frac{2}{\times4}-2+\frac{3}{\times4}=$

$\frac{26}{4}-\frac{11}{4}=\frac{15}{4}=3\frac{3}{4}$ $3\frac{3}{4}$ metres

b. Layla walked $2\frac{1}{2}$ *km* in the morning and $3\frac{3}{4}$ *km* in the evening.
How far did she walk in total?

$2\frac{1\times2}{2\times2} + 3\frac{3}{4} = 2\frac{2}{4} + 3\frac{3}{4}$

$= 5 + \frac{5}{4}$

$= 5 + 1\frac{1}{4}$

$= 6\frac{1}{4}$

$6\frac{1}{4}$ *km*

c. A runner completes $1\frac{3}{8}$ *km* each lap. He runs 5 laps.
What distance does he run?

$[8\times6=48]$

$1\frac{3}{8} \times 5 = \frac{11}{8} \times 5$

$= \frac{55}{8} = 6\frac{7}{8}$

$6\frac{7}{8}$ *km*

d. A recipe uses $1\frac{1}{4}$ cups of flour per cake. How much flour is needed for 3 cakes?

$1\frac{1}{4} \times 3 = \frac{5}{4} \times 3 = \frac{15}{4} = 3\frac{3}{4}$

$3\frac{3}{4}$ *cups*

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