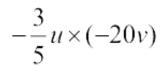
## Seventh Grade - Expression and Equation

1) Simplify the following expressions

$$\frac{5x}{3} \times 15$$

- 25x
- 34x
- 56x
- 22x

2) Simplify the following expressions



- 18uv
- 32uv
- 24uv
- 12uv

3) Simplify the following expressions

$$\frac{2}{3}y^{3} + \frac{1}{4}y^{3}$$
  
a)  $\frac{17}{30}y^{3}$  b)  $\frac{27}{11}y^{3}$  c)  $\frac{11}{12}y^{3}$  d)  $\frac{37}{30}y^{3}$   
• a

- d
- c
- b

4) Simplify the following expressions

$$\frac{2}{7}b^{4} + \frac{1}{14}b^{4}$$
a)  $\frac{5}{25}b^{4}b$ )  $\frac{7}{10}b^{4}c$ )  $\frac{5}{14}b^{4}d$ )  $\frac{3}{15}b^{4}$   
 $\overset{d}{\phantom{a}}_{5c}$ 

• a

5) Simplify the following expressions

i) 
$$\left(\frac{3}{5}y^{3}\right)\left(\frac{2}{7}y^{3}\right)$$
, ii)  $\frac{3}{5}y^{2} + \frac{2}{7}y^{2}$   
(a) i)  $\frac{6}{35}y^{6}$ , ii)  $\frac{31}{35}y^{2}$  (b) i)  $\frac{7}{10}y^{6}$ , ii)  $\frac{4}{10}y^{2}$   
(c) i)  $\frac{2}{11}y^{6}$ , ii)  $\frac{4}{12}y^{2}$  (d) i)  $\frac{5}{25}y^{6}$ , ii)  $\frac{3}{15}y^{2}$ 

- b
- d
- C
- a

6) Simplify the following expressions

$$\frac{4}{5}x^2 + x^2 - \frac{3}{7}x^2$$



- (48/35) x<sup>3</sup>
- (28/35) x<sup>2</sup>
- (48/35) x<sup>2</sup>
- (35/48) x<sup>2</sup>

7) Simplify the following expressions

$$\frac{3(y+1)}{5}+1-y$$

- (6 3y) / 8
- (8 2y) / 5
- (4 3y) / 9
- (3 2y) / 9

8) Simplify the following expressions

$$5 - 4\left[\frac{3}{4}x + 2y\right] + \frac{7}{5}y - 10x - 11$$
  
(a)  $\frac{47}{5}y - 13x - 6$  (b)  $\frac{27}{10}y - 19x - 8$   
(c)  $\frac{45}{12}y - 27x - 9$  (d)  $\frac{39}{5}y - 25x - 7$   
 $\stackrel{d}{\overset{c}{\phantom{a}}}$ 

9) Simplify the following expressions

$$5ab + \frac{3}{4}bc - 2\frac{1}{2}ab + \frac{1}{4}cb$$
(a)  $\frac{5}{2}ab+bc$  (b)  $\frac{1}{4}ab+bc$ 
(c)  $\frac{2}{3}ab-bc$  (d)  $\frac{5}{9}ab-bc$ 
  
.  $c$ 
.  $b$ 
.  $a$ 

• d

10) Simplify the following expressions

$$\frac{5(p-q)}{2} - \frac{2q-p}{14} - \frac{2(p+q)}{7}$$
• (52p-41q) / 18  
• (22p-41q) / 13  
• (41p-21q) / 18  
• (32p-41q) / 14

11) Express the following as a single fraction in its simplest form

$$\frac{x}{3} + \frac{2x}{5} - \frac{5x}{6}$$
  
• -x/12  
• x/14  
• -x/13  
• -x/10

12) Express the following as a single fraction in its simplest form

$$5e - \frac{3e - 4}{2} + \frac{e - 7}{3}$$
• (23e - 2)/6  
• (43e - 4)/9  
• (22a - 2)/7

(33e - 2) / 7
(35e - 2) / 5

13) Express the following as a single fraction in its simplest form

$$\frac{x+1}{2} + \frac{x+3}{3} - \frac{5x-1}{6}$$
• 1/4
• 5/3
• 1/2
• 2/3

14) Express the following as a single fraction in its simplest form

$$\frac{2(p-4q)}{3} - \frac{3(2p+9)}{2}$$
• (-32p-31q-81)/7  
• (-14p-16q-81)/6  
• (-24p-24q-41)/5  
• (-12p-14q-81)/5

15) Express the following as a single fraction in its simplest form

$$\frac{2(a-b)}{7} - \frac{2a+3b}{14} + \frac{a+b}{2}$$



- 6a/19
- 5a/16
- 9a/14
- 8a/13

16) Express the following as a single fraction in its simplest form

$$\frac{1}{2}a + b - \frac{3}{5}(a - b)$$

- (-a + 11b) / 21
- (-a + 16b) / 10
- (-a + 26b) / 15
- (-a + 13b) / 14

17) Express the following as a single fraction in its simplest form

$$\frac{x-1}{4} - \frac{6-2x}{3} + \frac{x}{2}$$
• (19x-19)/21  
• (14x-11)/19  
• (13x-15)/12  
• (12x-17)/15

18) Express the following as a single fraction in its simplest form

$$\frac{7q-4r}{3} - \frac{10q+4r}{9}$$

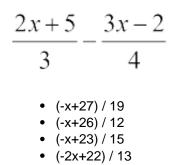
- (11q-16r) / 6
- (12q-13r) / 5
- (13q-12r) / 7
- (18q-14r) / 9

19) Express the following as a single fraction in its simplest form

$$\frac{3a+1}{5} - \frac{3a-2}{10}$$
• (6a+5)/16  
• (4a+2)/12  
• (3a+4)/10

• (7a + 5) / 18

20) Express the following as a single fraction in its simplest form



21) Solve the following linear equations with rational coefficients

$$\frac{2x+7}{4} = 12$$
• 11/2
• 30/4
• 23/3
• 41/2

22) Solve the following linear equations with rational coefficients

 $\frac{3}{5+2x} = 2$ 

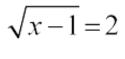
- -(7/4)
- -(3/5)
  -(3/4)
- -(3/4)
  -(5/4)

23) Solve the following linear equations with rational coefficients

$$\sqrt{2x+5} = 4$$

- 21/3
- 12/4
- 31/4 11/2

24) Solve the following linear equations with rational coefficients

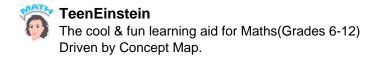


- 3
- 5 • 2
- 2
- 9

25) Solve the following linear equations with rational coefficients

 $2 + \frac{y-4}{3y} = 1$ 

- 2/3
- 4/3
- 5/4



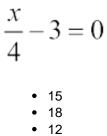
• 3/4

26) Solve the following linear equations with rational coefficients

$$(2x-3)^3 = \frac{1}{27}$$

- 4/9
- 5/7
- 4/6
- 2/3

27) Solve the following linear equations with rational coefficients



• 19

28) Solve the following linear equations with rational coefficients

$$\sqrt[3]{p} = 11$$

- 3234
- 1245
- 2344
- 1331

29) Solve the following linear equations with rational coefficients

$$3\sqrt{x} = 4$$

- 21/4
- 11/3
- 31/2
- 16/9

30) Solve the following linear equations with rational coefficients

$$\frac{3}{t} = \frac{5}{t-4}$$
• t = -7

- t = -5
- t = -9
- t = -6