

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

$$1 - 2x + x^2 + x - 2x^2 + x^3$$

$$x^3 - x^2 - x + 1$$

1. Solve for x in the equation

$$3(x + 4) = k(x - 2)$$

$x =$

$$3x + 12 = kx - 2k$$

$$3x = kx - 2k - 12$$

$$3x - kx = -2k - 12$$

3. Put over a common denominator and simplify.

$$\frac{10x + 15}{15}$$

$$\frac{9x + 6}{15}$$

$$\frac{2x + 3}{3} - \frac{3x + 2}{5} \cdot \frac{2}{3}$$

$$\frac{x + 9}{15}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$0.25 \text{ of } \frac{4}{3} = \frac{1}{3}$$

$$\frac{1}{3} \text{ of } 12 = 4$$

$$\frac{48}{3}$$

$$16 \cdot 0.25 = 4$$

$$4$$

5. Calculate

$$\frac{x + 9}{15}$$

$$20$$

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

$$(\frac{1}{16 - (\frac{1}{3} - \frac{1}{4})}) (\frac{1}{16 - (\frac{1}{3} - \frac{1}{4})})$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50 \cdot 3 = 150 \text{ mi}$$

$$120 \text{ left}$$

$$\frac{120}{60} = 2 \text{ hrs}$$

$$2$$

hours

7. Solve for x and y

$$x = 6$$

$$y = 4$$

$$3x - 5(10 - x) = -2$$

$$3x - 50 + 5x = -2$$

$$8x = 48$$

$$x = \frac{48}{8}$$

$$x = 6$$

$$6 + y = 10$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

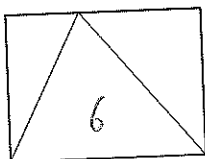
$$-700 + 700 + 150 + 150$$

$$\$ 400$$

$$200 \cdot 3.5 = 700$$

$$7 \cdot 150 = 1050$$

9. What is the area of the shaded region?



3 meters

$$6$$

square meters

4 meters

$$12 - 6 = 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{200,000}{200,000}$$

$$\frac{20}{100}$$

$$\frac{20}{100} = \frac{2}{10}$$

$$60$$

%

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).
If you score under 4 on this test, you should consider dropping the class.
If you score 4-7, seek help **NOW**: maybe enroll in CLAS?
If you score 8-10, congratulations! You are ready for Math 34A.

Justin Kluger

Score

8 / 10

530417-5

1. Solve for x in the equation

$$3(x+4) = k(x-2).$$

$$3x+12 = kx-2k$$

$x =$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

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

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

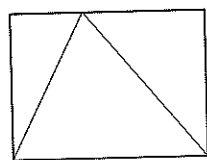
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$400

9. What is the area of the shaded region?



3 meters

4 meters

square meters

$$\frac{1}{2}bh$$

$$12 - 6 = 6$$

$$4 \cdot 3 = 12 \cdot \frac{1}{2} = 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = 7$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$1.25$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

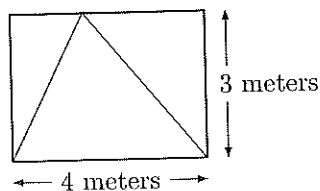
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$400 profit

\$1100 in total sales

9. What is the area of the shaded region?



$$6$$

square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60\%$$

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

$$\begin{array}{c} 1 - 2x + x^2 \\ 1 \quad + \quad -2x \quad + \quad x^2 \\ +x \quad x \quad -2x^2 \quad x^3 \end{array}$$

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{3} \times \frac{12}{1} = 16$$

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$1\frac{1}{4} \text{ or } \frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50(3) = 150$$

$$\frac{270 - 150}{60} = 2$$

$$h = 5$$

$$2+3=5$$

$$5$$

hours

7. Solve for x and y

$$\begin{aligned} 3(10-y) - 5(3x-5y) &= -2 \\ x+y &= 10 \end{aligned}$$

$$\begin{aligned} 2x+y &= 10 \\ -3x-5y &= -6 \\ \hline y &= 4 \end{aligned}$$

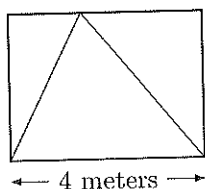
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?



$$\frac{1}{2}bh$$

$$\frac{1}{2}(4)(3) = \frac{1}{2}(12) = 6$$

$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{200,000 - 80,000}{200,000}$$

$$\frac{120,000}{200,000}$$

$$\sim 60\%$$

$$60$$

%

No calculators

provided on this page.

Ajani Tyehimba
J960315

Score

10

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{6+k}{2k}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)\right)^2}$$

$$5/4$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

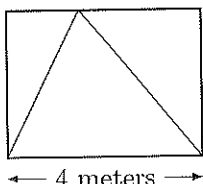
$$x = -2.5/3$$

$$y = -x + 10$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



3 meters

6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60%

%

boxes

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 7}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

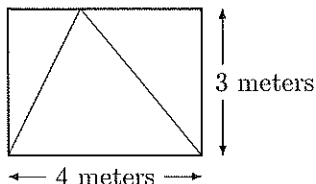
$$x = 10 - 4$$

$$y =$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

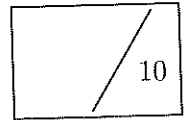
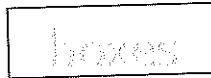
9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %



No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Tasmine Altamirano 6404115

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$x =$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

4. What is 25% of $\frac{4}{3}$ of 12?

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

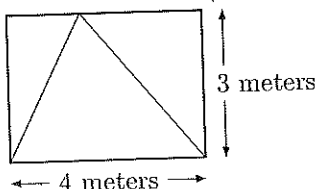
$x =$

$y =$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 m² square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

%

boxes

Score

8 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{kx - 2k - 4}{3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$270 - 150 = 120 \text{ miles}$$

5

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 10 - y$$

$$3(10 - y) - 5y = -2$$

$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$200 \times 3.5 = 700$$

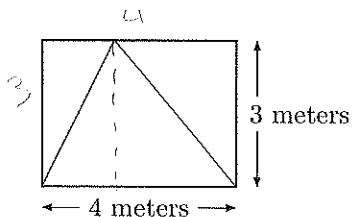
$$- 3 \times 100$$

$$+ 150 + 100 = 250$$

$$140 + 250 = 390$$

$$\$ 400$$

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$200,000$$

$$80,000$$

$$120,000$$

$$\frac{120,000}{200,000} = 60\%$$

60%

%

boxes

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for
- x
- in the equation

$$3(x+4) = k(x-2).$$

$$x = \frac{-6}{(3-k)}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

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

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5

hours

7. Solve for
- x
- and
- y

$$3x - 5y = -2$$

$$x + y = 10$$

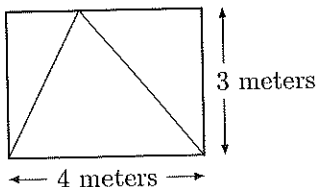
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6

square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60

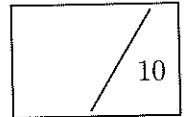
%

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

boxes

Score



No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{-2k-12}{3-k}$$

solved x on left not right

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$6 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

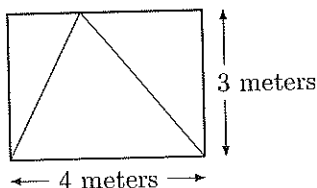
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{-2k - 12}{3 - k}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$3.5$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

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

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

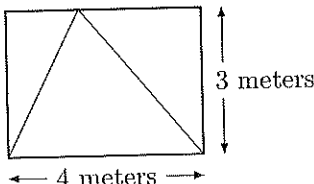
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

boxes

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Thay Toillan
5976394

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x+12 = kx-2k$$

$$x = \frac{-2k-12}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$\frac{5}{4}$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

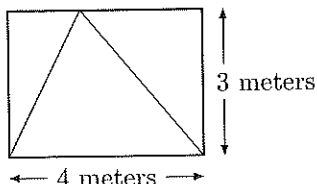
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60%

No calculators

boxes

Score

10

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

outside of boxes means
I'm doing corrections

<p>1. Solve for x in the equation</p> <p>$3(x + 4) = k(x - 2)$</p> <p>$x = \frac{-2k - 12}{3 - k}$</p>	<p>2. Multiply out and simplify. Check your answer.</p> <p>$(1 + x)(1 - 2x + x^2)$</p> <p>$1 - x + x^2 - 2x^2 + x^3$</p>
<p>3. Put over a common denominator and simplify.</p> <p>$\frac{2x + 3}{3} - \frac{3x + 2}{5}$</p> <p>$\frac{x - 1}{15}$</p>	<p>4. What is 25% of $\frac{4}{3}$ of 12?</p> <p>$\frac{1}{4} \times \frac{4}{3} = \frac{1}{3}$</p> <p>$\frac{1}{3} \times 12 = 4$</p>
<p>5. Calculate</p> <p>$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$</p> <p>$\frac{20}{16} = \frac{5}{4}$</p>	<p>6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?</p> <p>5 hours</p>
<p>7. Solve for x and y</p> <p>$3x - 5y = -2$</p> <p>$x + y = 10$</p> <p>$x = 6$</p> <p>$y = 4$</p>	<p>8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?</p> <p>\$ 400</p>
<p>9. What is the area of the shaded region?</p> <p>$\frac{1}{2}bh$</p> <p>$3 \times 4 = \frac{12}{2} = 6$</p> <p>$12 - 6 = 6m^2$</p>	<p>10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?</p> <p>60%</p>

boxes

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Laura Solano

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{-2k - 12}{3 - k}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{12} = \frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

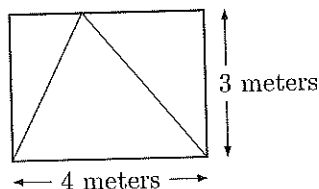
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$

400

9. What is the area of the shaded region?



6

square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{120,000}{200,000} = 60\%$$

No calculators

boxes

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{(2k + 12)}{(k - 3)}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{10x + 15}{15} - \frac{9x + 6}{15}$$

$$\frac{x + 9}{15}$$

4. What is 25% of $4/3$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

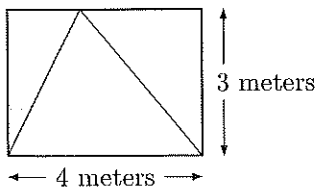
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

Veronica Bossa

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

boxes

Score

4 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2)$$

$x =$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$-60x + 315$$

4. What is 25% of $\frac{4}{3}$ of 12?

0.3

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

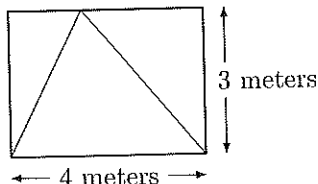
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 105,150

9. What is the area of the shaded region?



12 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60

%

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Heydi Zepeda

Perm: 5297932

1. Solve for x in the equation

✓

$$3(x+4) = k(x-2).$$

$$x = \frac{(-2k-12)}{(3-k)}$$

2. Multiply out and simplify. Check your answer.

✓

$$(1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

✗

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

$$\frac{-x+5}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{1}{4} \cdot \frac{25}{100} = \frac{x}{16}$$

$$25(16) = 100(x)$$

$$\frac{1}{4} = \frac{x}{16} \quad \frac{16}{4} = \frac{4x}{4} \quad x=4$$

4

5. Calculate

✗

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

?

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50(3) = 150$$

$$\frac{270}{150}$$

$$120 \rightarrow 2 \text{ hours if going } 60 \text{ mph} + 3 \text{ hours}$$

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

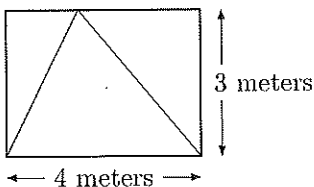
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

✗

\$

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{120,000}{200,000}$$

60 %

$$\frac{12}{20} = \frac{x}{100}$$

$$20x = 12(100)$$

$$\frac{20x}{20} = \frac{1200}{20} \quad x = 60$$

Elyse Hartmann

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

boxes

Score

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{-12-2k}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1-x-x^2+x^3$$

3. Put over a common denominator and simplify.

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4} \text{ or } 1.25$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50 \text{ mph} \cdot 3 \text{ hr} = 150 \text{ miles}$$

$$120 \text{ miles} = 60 \text{ mph} \times 2 \text{ hrs} + 3 \text{ hrs}$$

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

$$y = 4$$

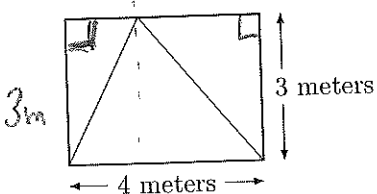
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$(3.5 \times 200) + 150 + (2.5 \times 100) = 1100$$

\$ 400

$$700 - 1100$$

9. What is the area of the shaded region?



6 square meters

$$3^2 + 4^2 = 5^2 \quad (3 \times 4) / 2 = 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{80,000}{200,000} \times 100$$

40 %

$$\frac{120,000}{200,000}$$

$$.4 \times 100 = 40 \quad 100 - 40 = 60$$

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

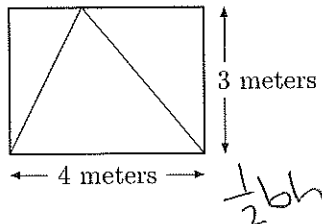
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

boxes

9/10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$3x = kx - 2k - 12$$

$$x = \frac{kx - 2k - 12}{3}$$

$$x = -2k + kx - 4$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify. work on back

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$270 - 150 = 120$$

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$3x - 5y = -2$$

$$3x + 3y = 30$$

$$-8y = -32$$

$$y = 4$$

$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

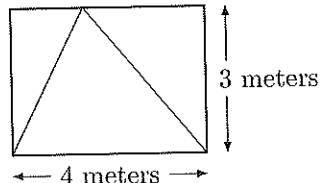
$$7 \text{ tons} = \$700$$

$$3.5 \text{ tons} = \$700$$

$$\$150$$

\$400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

$$\frac{120}{200} = \frac{60}{100}$$

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

✓

$$3(x + 4) = k(x - 2).$$

same as $\frac{12+2k}{k-3}$

$$x = \frac{(-2k-12)}{(-k+3)}$$

2. Multiply out and simplify. Check your answer.

✓

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

✓

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

$$\frac{x+9}{15}$$

or $\frac{x}{15} + \frac{3}{5}$

4. What is 25% of $\frac{4}{3}$ of 12?

✓

4

5. Calculate

✓

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$\frac{5}{4}$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

✓

5 hours

7. Solve for x and y

✓

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

$$y = 4$$

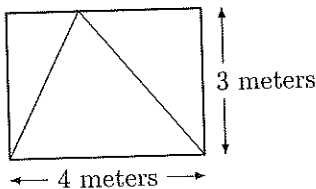
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

✓

\$ 400

9. What is the area of the shaded region?

✓

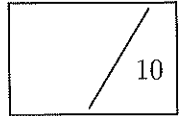
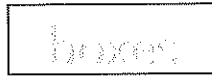


6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

✓

60 %



No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Paulina Dsouza

5095377

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x - 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\left(\frac{1}{12}\right)^{-1} = 12$$

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2} = \frac{5}{4}$$

$$256 + \left(\frac{1}{144}\right) \quad (\times)$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

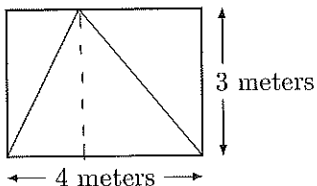
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

boxes

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2).$$

$$x = \frac{(2k-12)}{(3x-kx)}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 + x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

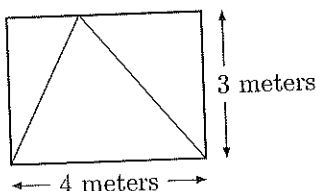
$$x = 0$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 m² square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

box

Score

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x+12 = kx-2k$$

$$x = 3x+12 = kx-2k$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x - 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

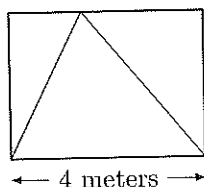
$x =$

$y =$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



3 meters

6 m² square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60

%

boxed

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for
- x
- in the equation

$$3(x+4) = k(x-2).$$

$$x = \frac{12+2k}{k-3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for
- x
- and
- y

$$3x - 5y = -2$$

$$x + y = 10$$

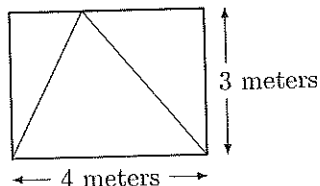
$$x = 9y - 6$$

$$y = -2x - 2$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 450

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

No calculators

boxes

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

$$\begin{array}{c} 1 \quad -2x \quad +x^2 \\ \times \begin{array}{|c|c|c|} \hline 1 & -2x & x^2 \\ \hline x & -2x^2 & x^3 \\ \hline \end{array} \end{array}$$

1. Solve for x in the equation

$$3(x+4) = k$$

$$\frac{3(x+4)}{x+2} = \frac{k(x-2)}{x+2}$$

$$x = \frac{12+2k}{k-3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - 4x^3 + x^6$$

3. Put over a common denominator and simplify. $\times 5$

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{1}{4} \cdot \frac{4}{3} \cdot \frac{1}{3} \cdot \frac{12}{1} = 1$$

$$(1) \cdot 4 = 4$$

5. Calculate

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

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

Common den.

$$\frac{4}{12} - \frac{3}{12}$$

$$(\frac{1}{12})^{-1} \rightarrow 12$$

$$(16-12)^2$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\frac{270}{150} = 1.8$$

$$5$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 10 - y$$

$$x = 6$$

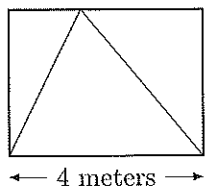
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{r} 100 \quad 3.5 \\ 700 \quad 4.5 \\ 850 \end{array}$$

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ m}^2 \text{ square meters}$$

$\frac{1}{2} \text{ box} - \text{area of rec}$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{80}{200}$$

$$\frac{4}{10}$$

$$60$$

%

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = -7$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - 3x + x^5$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15} ?$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$25\% \text{ of } 16 \text{ is } 4$$

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\left(16 + \frac{1}{8}\right)^2 ?$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

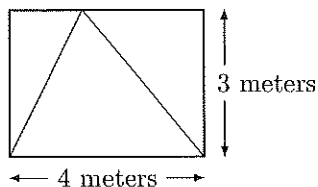
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?



$$12 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{-2k-12}{4-k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{257}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

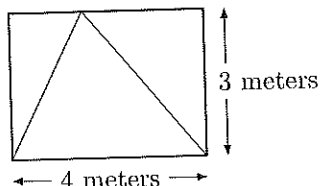
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

%

No calculators

boxes

Score

10

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help **NOW**: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{k}{3} - 14 \quad \bigg/ \quad \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 + x + 2x + x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4.0$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{26}{16}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

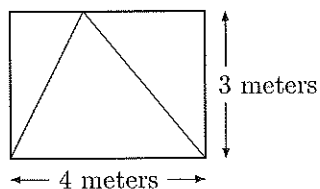
$$x = \frac{-2 + 5y}{3} \quad 6$$

$$y = \frac{6}{5} \quad 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$400$$

* 9. What is the area of the shaded region?



$$6 \text{ m}^2 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{120,000}{200,000} \cdot 100\% \quad \%$$

No calculators

boxes

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

X

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$3x - kx = -2k - 12$$

$$x = \frac{12 + 2k}{3 - k}$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

2. Multiply out and simplify. Check your answer. ✓

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

4. What is 25% of $\frac{4}{3}$ of 12? ✓

4

5. Calculate ✓

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

5/4

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take? ✓

5

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

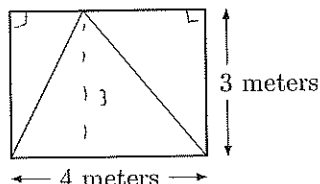
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make? ✓

\$ 400

9. What is the area of the shaded region? ✓



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep? ✓

60 %

Put your final answers in the

boxes

Score

9 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{15}{2k} + \frac{1}{2}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

$$5/4$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

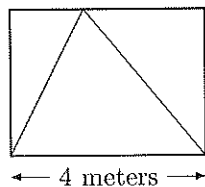
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

No calculators

boxes

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = -\frac{k2+12}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

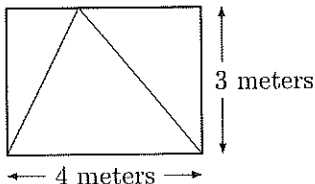
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ ~~150~~ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

boxes

8 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$\frac{12 + 2k}{k - 3}$$

$$3(x + 4) = k(x - 2).$$

$$x = \frac{6 - k}{-k}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x + x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4} \text{ or } \frac{20}{16}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

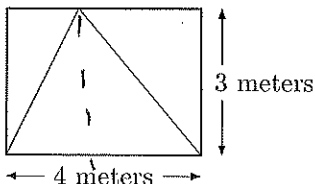
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 100

\$400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2).$$

$$x = 4$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^5 - 2x^2 - 2x + 1x$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3 \cdot 5} - \frac{3x+2}{5 \cdot 2}$$

$$\frac{5x+5}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

~~5~~

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$



6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

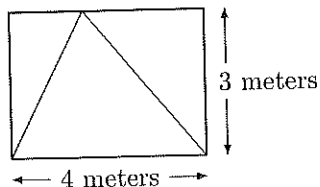
$$x =$$

$$y =$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 2000

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

No calculators

provided on this page.

5844980

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3x + 12 = kx - 2k$$

$$12 + 2k = kx - 3x$$

$$12 + 2k = x(k - 3)$$

$$3(x + 4) = k(x - 2)$$

$$x =$$

$$\rightarrow \frac{12 + 2k}{k - 3} = x$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 + x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{12}{1} \times \frac{4}{3} = \frac{48}{3} \times \frac{1}{4} =$$

$$4$$

$$48/12 =$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$5/4$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\frac{50 \text{ mi}}{1 \text{ hr}} \times \frac{3 \text{ hr}}{1} = 150$$

$$120 \text{ mi} \times \frac{\text{hr}}{60 \text{ m}} = 2$$

$$270 - 150 = 120$$

hours

$$2 \rightarrow 5 \text{ hrs}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$3.5 \times 200 = 700$$

$$1 \times 150 = 150$$

$$2.5 \times 100 = 250$$

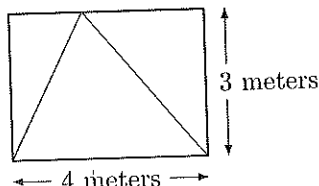
$$700 + 150 + 250 = 1100$$

$$7 \times 100 = 700$$

$$1100 - 700 = 400$$

$$400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$200 - 80 = 120$$

$$\frac{120}{200} \times 100 = 60\%$$

$$\frac{20}{1} \times \frac{1}{100} = \frac{12}{1}$$

$$\frac{20}{1} \times \frac{60}{100} = \frac{120}{100}$$

$$60\%$$

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

boxes

Score

	10
--	----

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$x =$

--

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 + x - 2x - x^2 + x^3$$

--

3. Put over a common denominator and simplify.

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

$\frac{x + 9}{15}$

4. What is 25% of $\frac{4}{3}$ of 12?

4

--

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

--

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

--

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$x =$

$y =$

--

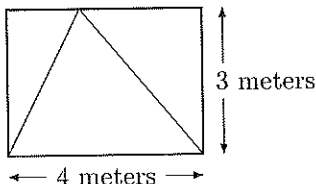
--

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ ~~700~~ 400

--

9. What is the area of the shaded region?



square meters

--

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

--

boxes

7 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{-10}{3-k}$$

2. Multiply out and simplify. Check your answer.

+

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

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

5. Calculate

+

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$5/4$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$2 \text{ hours}$$

7. Solve for x and y

+

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

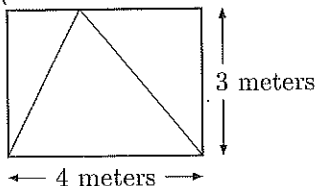
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?

+



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

+

$$100 \left(\frac{120,000}{200,000} \right) = 60 \%$$

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Esther Wang

4761847

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$\begin{array}{r} 12 + 2k \\ \hline k - 3 \\ \hline x = \frac{kx - \frac{2}{3}k - 4}{5} \end{array}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - 2x + x^2 + x - 2x^2 + x^3 = 1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{6}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

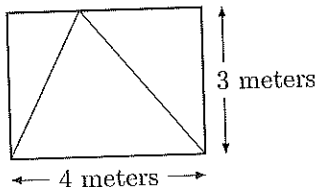
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

boxes

Hadeel Eljarrari

Score

10

No calculators

provided on this page.

8822272

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$12 + 2k = kx - 3x$$

$$12 + 2k = y(k - 3)$$

$$\frac{12 + 2k}{k - 3} = y$$

$$(5x + 12) = kx$$

$$5x + 12 = x$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$-2x^2 + x^3 + x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\left(\frac{5}{5}\right)\frac{2x + 3}{3} - \frac{3x + 2}{5}\left(\frac{3}{3}\right)$$

$$\frac{x + 9}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{12}{4} = 3$$

$$\frac{3}{4} = \frac{9}{4}$$

$$\frac{9}{4} \times \frac{1}{4} = \frac{9}{16}$$

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\frac{270}{150} = 1.8$$

$$\frac{150}{60} = 2.5$$

$$1.8 + 2.5 = 4.3$$

$$5$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$3x - 5(10 - x) = -2$$

$$3x - 50 + 5x = -2$$

$$8x = 48$$

$$x = 6$$

$$y = 4$$

$$x =$$

$$y =$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$7 \times 100 = 700$$

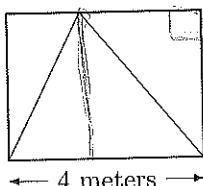
$$700 \times \frac{1}{2} = 350$$

$$350 \times 2 = 700$$

$$700 + 150 = 850$$

$$850 - 700 = 150$$

9. What is the area of the shaded region?



3 meters

$$6$$

square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{80}{200} = 0.4$$

$$1 - 0.4 = 0.6$$

$$0.6 \times 100 = 60$$

%

No calculators

boxes

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$3x + 12 = kx - 2k$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

3. Put over a common denominator and simplify.

$$\frac{5}{5} \times \frac{2x + 3}{3} - \frac{3x + 2}{5} \times \frac{2}{3}$$

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

4. What is 25% of $\frac{4}{3}$ of 12?

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

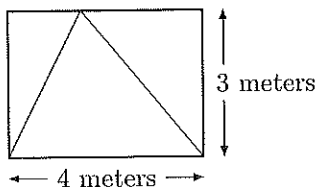
$$x = 6$$

$$y = -4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{(-2k - 12)}{(3 - k)}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$1.25$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

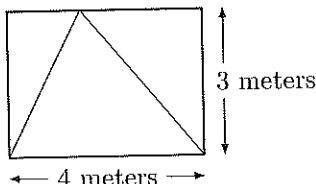
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?



$$6$$

square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60$$

%

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$\frac{12+2k}{k-3}$$

$$3(x+4) = k(x-2).$$

$$x = \frac{14}{k-3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

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

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

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

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5hrs hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

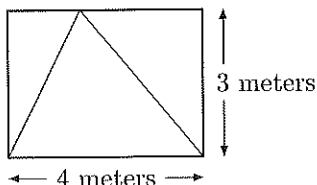
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$400 profit
1100 in total

9. What is the area of the shaded region?



square meters

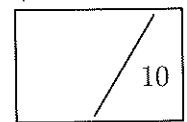
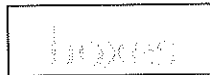
6m²

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{120,000}{200,000}$$

60%

%



No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{7.7} \quad \frac{20}{16}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

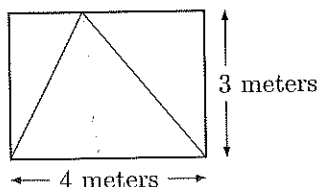
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

No calculators

boxes

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help **NOW**: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{3x + 14}{1k}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 + x^2 + x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{-1x + 1}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

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

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

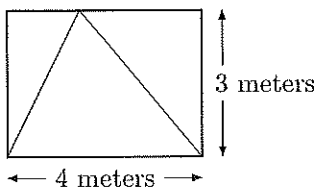
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$\frac{120,000}{200,000}$ %

Xuanyu Zhou

Math 34A Winter 2021
Entrance Quiz

Perm Number
6382899

Put your final answers in the

boxes

Score

8 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$\frac{12+2k}{k-3}$$

$$3(x+4) = k(x-2).$$

$$x = \frac{-2(k+6)}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1-x-x^2+x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{-x+9}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

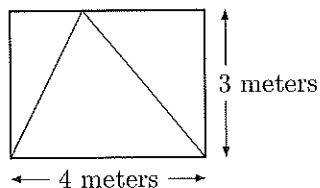
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

box

7 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Samuel Espinoza 4/14/12

1. Solve for x in the equation

$$3(x+4) = k(x-2).$$

$$x = \frac{+2k+12}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - 2x + x^2 + x - 2x^2 + x^3$$

$$(1 - x - x^2 + x^3)$$

3. Put over a common denominator and simplify.

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

4. What is 25% of $4/3$ of 12?

$$\frac{12}{3} = 4$$

$$4 \times \frac{4}{3} = \frac{16}{3}$$

$$\frac{16}{3} \times \frac{1}{4} = \frac{4}{3}$$

4

5. Calculate

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

20

16 - (1/3 - 1/4)^-1

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$150$$

$$270$$

$$120$$

$$150$$

$$120$$

$$120$$

5

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x + y = 10$$

$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$7 \times 100 = 700$$

$$3.5 \times 200 = 700$$

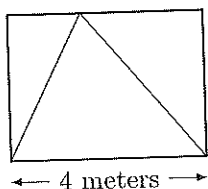
$$1 \times 150 = 150$$

$$2.5 \times 100 = 250$$

$$700 + 700 + 150 + 250 = 1800$$

$$\$ 400$$

9. What is the area of the shaded region?



3 meters

12 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$200,000$$

$$80,000$$

$$120,000$$

$$50$$

$$100,000$$

60

%

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$3x - kx = -2k - 12$$

$$x(3-k) = -2k-12$$

$$x = \frac{-2k-12}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{10x+15}{15} - \frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{12}{1} \times \frac{4}{3} = \frac{48}{3} \times \frac{1}{4}$$
$$= \frac{48}{12} = 4$$

$$4$$

5. Calculate

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

$$5/4$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$270 - 150 = 120$$

$$120 \div 60 = 2 \text{ hrs.}$$

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = y + 10$$

$$x = 6$$

$$y = 4$$

$$x + 4 = 10$$
$$x = 6$$

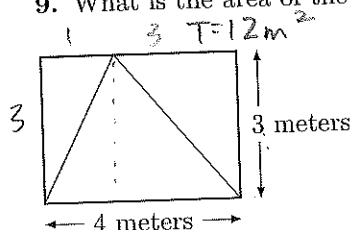
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{r} 200 \\ \times 3.5 \\ \hline \$700 \\ + \$150 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ \times 2.5 \\ \hline \$250 \end{array}$$

$$\$400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

$$1.5 + 4.5$$

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

boxed area

Score

9/10

No calculators

provided on this page.

Scoring: A question is ^{either} completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x+12 = kx-2k$$

$$3x-kx = -12-2k$$

$$x(3-k) = \frac{-12-2k}{(3-k)}$$

$$x = \frac{-(12+2k)}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $(4/3 \text{ of } 12)$?

$$\frac{12}{1} \cdot \frac{4}{3} = 16$$

$$16 \cdot 0.25 = 4$$

4

5. Calculate

$$\frac{1}{9} - \frac{1}{16}$$

$$\frac{16}{144} - \frac{9}{144} = \frac{7}{144}$$

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

$$\frac{20}{256(\frac{1}{3} - \frac{1}{4})^2}$$

$$\frac{20(\frac{3}{4})^2}{256}$$

the sum of proper or b of 16.

X

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50 \text{ mph} \cdot 3 \text{ h} = 150 \text{ miles}$$

$$270 \text{ miles} - 150 \text{ miles} = 120 \text{ miles}$$

$$\frac{120}{60} = 2 \text{ hours}$$

$$3 \text{ h} + 2 \text{ h} = 5 \text{ h}$$

5

hours

7. Solve for x and y

$$18 - 20 = -2$$

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 10 - y$$

$$3(10-y) - 5y = -2$$

$$30 - 3y - 5y = -2$$

$$-8y = -32$$

$$y = 4$$

$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\text{Original cost} = 700$$

$$3.5 \text{ tons} (700) = 2450$$

$$1 \text{ ton} (150) = 150$$

$$1250 - 700 = 550$$

$$\$400$$

$$700$$

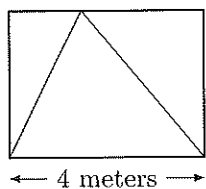
$$25$$

$$1500$$

$$2000$$

$$2400$$

9. What is the area of the shaded region?



3 meters

6

square meters

$$\frac{4 \cdot 3}{2} = 6$$

$$4 \cdot 3 = 12$$

$$12 - 6 = 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{8}{20} = \frac{4}{10} = \frac{2}{5} = 40\%$$

60

%

$$100 - 40 = 60\%$$

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{k+6}{3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x-9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$20/14$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

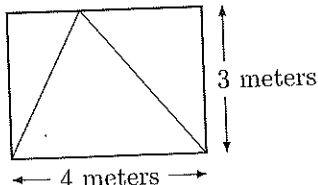
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

box(es)

Score

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help **NOW**: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for
- x
- in the equation

$$3(x+4) = k(x-2).$$

$$x = \frac{12+2k}{k-3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for
- x
- and
- y

$$3x - 5y = -2$$

$$x + y = 10$$

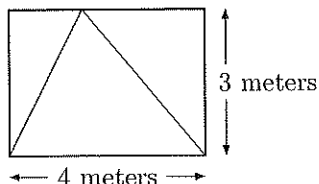
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

Brooke Ryan 3857836

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

boxes

Score

9/10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{2k+12}{(k-3)}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

Put over a common denominator and simplify.

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

$$\frac{x + 9/15}{15}$$

4. What is 25% of $4/3$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4} \approx 1.25$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

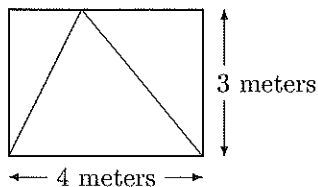
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ ~~400~~ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

boxes

10 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$x + 9/15$$

4. What is 25% of $4/3$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

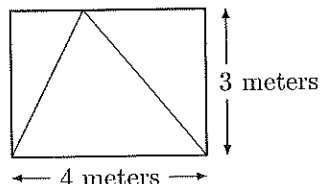
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

Mixed equations

$$3(x+4) = k(x-2).$$

$$x = \frac{(-2k-12)}{(3-k)}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{10x+15}{15} - \frac{9x+6}{15}$$

$$x +$$

didn't simplify

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

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

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

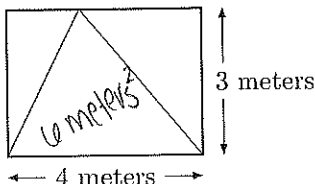
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

rounded too high

$$\$ 350$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

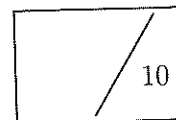
10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

Richeng Liang

9695222

Score



No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x+12 = kx-2k$$

$$x = \frac{(12+2k)}{(k-3)}$$

$$3x+12 = kx-2k \quad x =$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$(1-2x+x^2+x-2x^2+x^3)$$

$$= 1-x-x^2+x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{10x+15}{15} - \frac{9x+6}{15}$$

$$= \frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

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

$$4$$

5. Calculate

$$16 - \left(\frac{1}{12}\right)^{-1}$$

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$16 - 12$$

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

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$3x + 3y = 30$$

$$8y = 32$$

$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

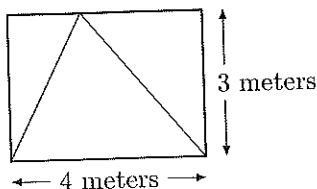
$$\text{Cost: } 700$$

$$3.5 \cdot 200 = 700$$

$$1 \cdot 150 \quad 150 + 250$$

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

Zhangying Ye

Put your final answers in the

boxes

Score

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help **NOW**: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = -\frac{2k+12}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

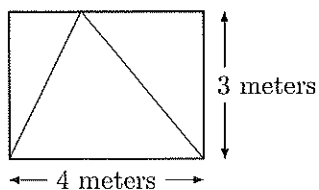
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6

square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60

%

Savina Kate 6511505

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

boxes

Score

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

✓

1. Solve for x in the equation

$$3(x+4) = k(x-2).$$

$$x = \frac{-2k + 12}{3 - k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

✓

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

✓

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{16}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

✓

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

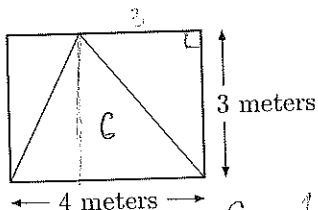
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

✓

9. What is the area of the shaded region?



6 square meters

$$S = \frac{1}{2} h \cdot a$$

$$12 - 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

boxes

10/10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Morgan Johnson
5020847

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{k + 12}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

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

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$2.0$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

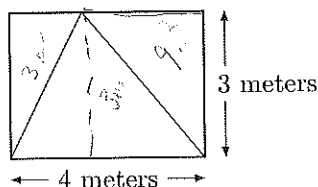
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

box

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = 7$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$2x + x^2$$

3. Put over a common denominator and simplify.

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

$$\frac{x - 9}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$3$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$1257232$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hrs} \quad \text{hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

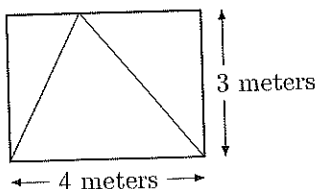
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?



$$? \quad \text{square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$200,000 - 80,000 = 120,000$$

$$60 \quad \%$$

$$120,000 = 60\%$$

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$\frac{x+4}{x-2} = \frac{k}{3}$$

$$3(x+4) = k(x-2)$$

$$3(x+4) = k(x-2)$$

$x =$

answer: $\frac{12+2k}{k-3}$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{3} \cdot \frac{12}{1} = \frac{48}{3} = 16$$

4

5. Calculate

$$\left(16 - \frac{1}{12}\right)^2 - \left(16 - \frac{1}{12}\right)^2$$

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{4}{12} = \frac{1}{3}$$

$$15.6 \left(\frac{20}{16}\right)$$

$$\frac{20}{\left(16 - \left(\frac{1}{12}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50 \text{ mph } 3 \text{ hours} = 150 \text{ mi}$$

5

hours

$$3 \times 2 = 6$$

$$\frac{270}{60} = 4.5$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

$$y = 4$$

$$3(10-y) - 5y = -2$$

$$13 - 2y = 2$$

$$30 - 3y - 5y = -2$$

$$x = 10 - y$$

$$x + y = 10$$

$$-8y = -32$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$3.5 \text{ tons} = 200 \text{ per ton}$$

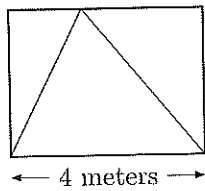
$$1 = 150 \text{ per ton}$$

$$2.5 = 100 \text{ per ton}$$

$$\$400$$

$$\frac{1100}{100} = 11$$

9. What is the area of the shaded region?



3 meters

$$12 \text{ square meters}$$

4 meters

$$4 \cdot 3 = 12$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{200}{120}$$

$$\frac{120}{200} = \frac{60}{100}$$

60%

%

hours

Score

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for
- x
- in the equation

$$3(x+4) = k(x-2).$$

 $x =$ ~~X~~

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x+21}{15}$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

~~X~~

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5

hours

7. Solve for
- x
- and
- y

$$3x - 5y = -2$$

$$x + y = 10$$

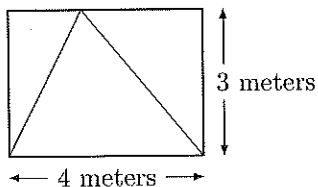
$$x = -24$$

$$y = 10 - x$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60

%

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help **NOW**: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

Leonardo Berta
513 2964

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{-k-12}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{(x+9)}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

10 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

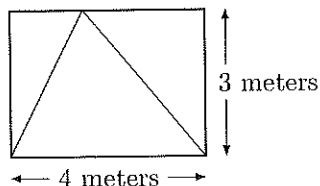
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

boxes

10

No calculators

provided on this page.

Pierce Medosch Myers

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

617978-2

1. Solve for x in the equation

$$3(x+4) = k(x-2).$$

$$x = \frac{2k+12}{k-3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

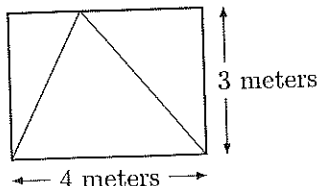
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

Images

Score

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help **NOW**: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for
- x
- in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - 3x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

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

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for
- x
- and
- y

$$3x - 5y = -2$$

$$x + y = 10$$

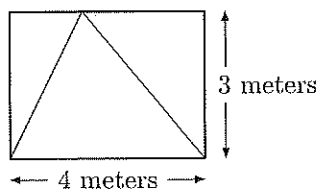
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

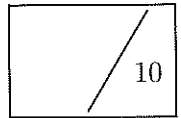
\$400

9. What is the area of the shaded region?

6m² square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60%



No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3x + 4 =$$

$$3(x + 4) = k(x - 2)$$

$$3x + 12 = kx - 2k$$

$$3x + 2k + 12 = kx$$

$$x = 3x + 14$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - 2x + x^2 + x - 2x^2 + x^3$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

$$\left(\frac{1}{5}\right) \frac{2x + 3}{815} - \frac{3x + 2}{15} \left(-\frac{1}{3}\right)$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$x = .25$$

5. Calculate

-Find LCD

-Negative Exponent

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{16}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50 \text{ mph}$$

3	4	5
50	50	50
150	200	250

$$150 \text{ mi}$$

$$5 \text{ hours}$$

$$\frac{50}{50} = 1$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x =$$

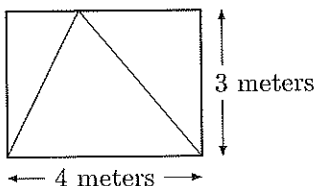
$$y =$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{r} \$100 \times \frac{1}{2} = 50 \\ 200 \times 3.5 = 700 \\ 150 \times 1 = 150 \\ 100 \times 2.5 = 250 \\ \hline 1200 \end{array}$$

$$\$400$$

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{array}{r} 200,000 \\ - 80,000 \\ \hline 120,000 \\ 120,000 / 200,000 = 60\% \end{array}$$

$$60\%$$

$$\frac{120}{200} = \frac{12}{20} = \frac{6}{10} = 60\%$$

boxes

Score

10 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Melody Hway

MATH 34A

5212071

1. Solve for x in the equation

$$3x - kx = -2k - 12$$

$$\frac{x(3-k)}{(3-k)} = \frac{-2k-12}{(3-k)}$$

$$3(x+4) = k(x-2)$$

$$3x+12 = kx-2k$$

$$-kx - kx$$

$$3x+12-kx = -2k$$

$$x = \frac{(2k+12)}{(3-k)}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - 2x + x^2 + 1x - 2x^2 + x^3$$

$$x^3 - 1x^2 - x + 1$$

10x+15-9x+6 Put over a common denominator and simplify.

$$\frac{5(2x+3)(3x+2)}{3 \cdot 5 \cdot 5 \cdot 3}$$

$$\frac{1x+9}{15}$$

$$\frac{10x+15-9x-6}{15}$$

4. What is 25% of $4/3$ of 12?

0.25

$$\frac{1}{4} \cdot \frac{4}{3} = \frac{1}{3} \cdot 12 = \frac{48}{12} = 4$$

4

5. Calculate

$$\frac{1}{3} - \frac{1}{4} = \frac{4}{12} - \frac{3}{12} = \frac{1}{12}$$

$$\left(\frac{1}{12}\right)^{-1} = 12$$

$$\frac{20}{(16 - 12)^2} = \frac{20}{4^2} = \frac{20}{16}$$

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

$$\frac{20}{16}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\frac{50}{150} \cdot 270 = \frac{150}{120} \cdot 270 = \frac{60}{120} \cdot 270$$

5 hours

$$3+2=5 \text{ hours}$$

7. Solve for x and y

$$\begin{matrix} x+4=10 \\ -4 \quad -4 \\ \hline x=6 \end{matrix}$$

$$\begin{matrix} 3x-5y=-2 \\ x+y=10 \\ -y \quad -y \\ \hline 3(10-y)-5y=-2 \end{matrix}$$

$$3(10-y) - 5y = -2$$

$$30 - 3y - 5y = -2$$

$$30 - 8y = -2$$

$$-8y = -32 \quad y = 4$$

$$x = 6$$

$$y = 4$$

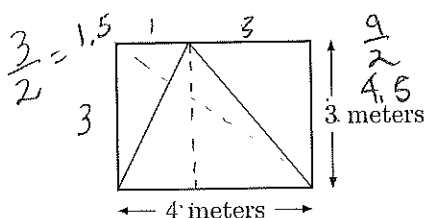
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{matrix} 200 & 7000 & 7000 \\ 3.5 & 150 & 150 \\ \hline 1000 & 7150 & 7150 \\ 1000 & 250 & 1150 \\ \hline 1000 & 7400 & 7400 \\ 150 & 700 & 700 \\ \hline 150 & 400 & 400 \end{matrix}$$

\$ 400

\$ 103.0

9. What is the area of the shaded region?



6.0 square meters

$$3^2 + 3^2$$

$$4.5$$

$$1.5$$

$$4.5$$

$$\Delta A =$$

$$u.w$$

$$1.5$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{200,000 - 80,000}{200,000} = \frac{120,000}{200,000}$$

60 %

$$\frac{120,000}{200,000} = \frac{120}{200} = \frac{12}{20} = \frac{3}{5} = \frac{60}{100}$$

$$\frac{120}{200}$$

$$\frac{12}{20}$$

$$\frac{3}{5}$$

$$\frac{60}{100}$$

$$\frac{20}{100}$$

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

boxes

Score

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$20/16$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

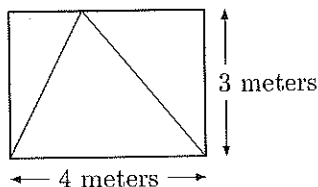
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 9150

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

20

%

boxes

Score

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Isabel Ibarra
598506-4

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{16}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

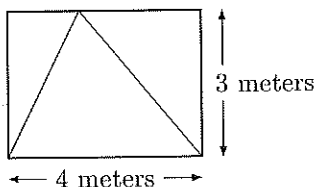
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

0.6 → 60 %

boxes

Score

10 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Elaine Zhong
6207738

$$1 - 2x + x^2 + x - 2x^2 + x^3 = 1 - x - x^2 + x^3$$

1. Solve for x in the equation

$$3x - kx = \frac{-2k - 12}{3 - k}$$

$$3(x + 4) = k(x - 2)$$

$$3x + 12 = kx - 2k$$

$$3x - kx = \frac{-2k - 12}{3 - k}$$

$$x = \frac{-2k - 12}{3 - k}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

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

$$\frac{x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{1}{4} \times \frac{4}{3} \times 12$$

$$4$$

5. Calculate

$$\frac{20}{16} \div \frac{5}{4}$$

$$\frac{20}{16} \times \frac{4}{5} = \frac{20 \times 4}{16 \times 5} = \frac{80}{80} = 1$$

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

$$5/4$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50 \times 3 = 150$$

$$270 - 150 = 120$$

$$120 \div 60 = 2$$

$$3 + 2 = 5$$

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$3(10 - y) - 5y = -2$$

$$30 - 3y - 5y = -2$$

$$30 - 8y = -2$$

$$-8y = -32$$

$$y = 4$$

$$x = 10 - 4 = 6$$

$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$7 \times 100 = 700$$

$$3.5 \times 200 = 700$$

$$1 \times 150 = 150$$

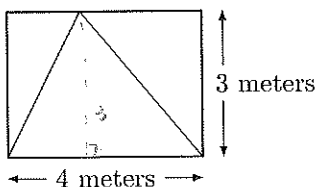
$$2.5 \times 100 = 250$$

$$700 + 700 + 150 + 250 = 1800$$

$$1800 - 700 = 1100$$

$$\$ 1100$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$200,000 - 80,000 = 120,000$$

$$\frac{120,000}{200,000} = \frac{12}{20} = \frac{3}{5} = 60\%$$

$$60\%$$

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

boxes

Score

10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help **NOW**: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x+12 = kx-2k$$

$$3x-kx = -2k-12$$

$$x = \frac{-2k-12}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{10x+15}{15} - \frac{9x+6}{15} = \frac{10x+15-9x-6}{15} = \frac{x+9}{15}$$

4. What is 25% of $4/3$ of 12?

4

5. Calculate

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

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

$$\frac{20}{16} = \frac{5}{4} = 1.25$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50 \cdot 3 = 150 \text{ miles @ 3 hrs}$$

$$120 \div 60 = 2 \text{ hrs}$$

$$150 + 120 = 270$$

$$3 \text{ hrs} + 2 \text{ hrs} = 5 \text{ hrs}$$

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$7 \text{ tons} \cdot \$100 = \$700$$

$$3.5 \text{ tons} \cdot \$200 = \$700$$

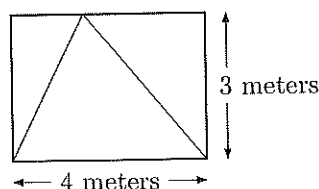
$$1 \text{ ton} \cdot \$150 = \$150$$

$$1.5 \text{ tons} \cdot \$100 = \$150$$

$$\$700 + \$700 + \$150 + \$150 = \$1700$$

\$1700

9. What is the area of the shaded region?



6 square meters

$$\frac{1}{2}bh$$

$$\frac{1}{2}(4)(3)$$

$$6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{\$200,000 - \$80,000}{\$200,000}$$

$$\frac{120,000}{200,000} = 60\%$$