1. Find the equation of the line passing through the points $(-3, 13)$ and $(2,-2)$.
2. Find the point of intersection of the lines $y-x-4=0$ and $y=2x-1$ using substitution and elimination.
3. Expand and simplify the expression
4. $-3\left(x+3\right)\left(x-2\right) b) \left(2x-3\right)^{2}$
5. Factor the expressions
6. $3t^{2}+6t+3$
7. $6x^{2}+4x-10$
8. $4x^{2}-49$
9. $\frac{1}{2}x^{2}+3x$
10. Complete the square and state the vertex: $y=2x^{2}-8x+3$
11. Solve for x.
12. $5\left(x+2\right)=3\left(x-1\right)$
13. $x^{2}=4x$
14. $2x^{2}-5x+2=0$
15. $\frac{x}{5}=\frac{3}{2}+\frac{x}{4}$

Complete the “Review of Essential Skills” handout (first two pages).

**Review of Essential Skills – Getting Started for Unit 1**

1. Operations with Integers Ex. Evaluate

a) 3 + (–6)( –4) b) (–5)2 c) –34

1. Operations with Rational Numbers Ex. Evaluate 
2. Evaluating Algebraic Expressions. Find the value of 5*x*2 *y* + 6*xy* – 4*y*2 – 1 if *x* = – 3 & *y* = 2
3. Expanding and Simplifying Algebraic Expressions Ex. Expand and simplify

a) 5*x*2 *y*(2*xy* – 3*y*2) b) (3*x* + 2*y*)2 c) 

1. Factoring Ex. Factor fully

a)  b)  c) 

1. Solving Equations Ex. Solve

a)  b) 

1.a) 27 b) 25 c) –81 2.  3. 37

4.a) 10*x*3*y2 –* 15*x*2*y3* b) 9*x2 +* 12*xy* + 4*y*2 c) 

5. a) (*x* + 5*y*)(*x* – 5*y*) b) (*x* + 1)(*x* – 6) c) 2(3*x* + 1)(*x* + 2)

6. a) 2 b) 1, 3 c) 

 \

 c) 

**Essential Grade 10 Skills Needed for Later Units**

1. Graphing Ex. Name the type of relation, name the original (untransformed) function, list the transformations, then graph.

a)  b) 



1. Solving Linear Systems

Ex. Solve





1. Quadratics – Completing the Square

Ex. Find the vertex of 

1. Trigonometry

Ex. Determine the value of θ rounded to nearest degree and/or *x*, rounded to nearest tenth

a) b) c)

6.0 m

36°

*x*

5.0 m

*x*

θ

85°

8.0 m

51°

9.0 m

*x*

10.5 cm

14.6 cm

θ

d)

71.0 cm

θ

45.0 cm

66.0 cm

Solutions

7. a) linear, *y = x* ,

 reflect about *x* axis,

 vertical stretch by a factor of 4,

 translate up 5 units

 b) quadratic, *y = x2* ,

 vertical stretch by a factor of 2,

 translate right 3 units and down 4 units

8.(–3, –11) 9. (3, 43)

10. a) θ = 44°, *x* = 10.1 cm b) θ = 44°, *x* = 11.5 m c) *x* = 3.5 m d) θ = 77°